

TOWARDS A THEORY OF ECONOMIC DEVELOPMENT

BY THE SAME AUTHOR

Socialistic Pattern in India

Current International Problems

Recent Issues in International Finance & Development

TOWARDS A THEORY OF ECONOMIC DEVELOPMENT

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Preface

While this attempt treads the familiar grounds in the theory of economic development, it does try to raise certain new issues. It is true that the whole subject of economic development bristles with controversies and economists never agree on a specific issue. It would, therefore, be futile to suggest that one could present the complete (or all comprehensive) view of the theory of economic development. In fact, the whole interest in economic development lies in the fascinating controversies that it raises. This attempt, if at all, tries to add up a few more controversies. The path that this book follows is as under.

In the first two Chapters some preliminary issues have been raised for understanding the process of economic development. Why has interest in economic development gained a big momentum in recent years? Is it (economic development) the same thing as economic growth? Could there be any standard yardstick for measuring economic development?

In Chapter III we have raised certain problems in connection with the utilisation of surplus manpower for economic development. We also develop here the theory of balanced growth and question whether it can be had in isolation of the farm sector. In Chapter IV we try to develop the theory of balanced development and also discuss the interrelated issues that are raised, like those that fall under investment criteria and choice of techniques.

In Chapter V the problems posed by capital, in the theory of development, are discussed. Here we make especial analysis of the capital co-efficient concept in order

(vi)

to see how far this could be used as an effective tool for accumulating capital in developing economies. The follow up Chapter VI tries to develop some new approaches on the problem of population and employment. The problems of planning and price mechanism are tackled in the next Chapter VII and an attempt is made here to integrate these in the theory of development. The last Chapter VIII provides an overall view of the whole discussion and tries to formulate certain policy issues.

V. S. MAHAJAN

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I

Introduction

Economic development is an old problem. In fact, it is as old as history itself, though it has found new perspective in recent years.

The Classical Framework

While the problem had been actively debated in the eighteenth and the early part of the nineteenth century by the British classical economists—Adam Smith¹, Ricardo², Malthus³ and Mill⁴ through their basic treatise of Economics, discussions in academic circles and their contribution in the form of official documents—it was somehow relegated into the background during the major part of the nineteenth and early part of the twentieth centuries. The reason for this is easy to make out. The British economy had been, by the early part of the 19th century, through the industrial revolution and was well poised on the path of Rostowian self-sustained growth. It had, besides, built up a huge colonial empire. The latter itself had been an

1. *The Wealth of Nations.*

2. *On the Principles of Political Economy and Taxation.*

3. *Essays on the Principles of Population.*

4. *Principles of Political Economy.*

important contributing factor to the British prosperity. Their interest had therefore shifted from initiating the process of economic development to that of maintaining a high level of prosperity.

Even so, Marx and Schumpeter, appearing on the scene in the later part of this period, had mainly been preoccupied with analysing the forces behind the process of economic development, though their conclusions have been so different from one another. While Marx⁵ has tried to build up the theory of socialism with a complete state control over the means of production and distribution, Schumpeter⁶ has followed a diametrically opposite path. He has mainly stressed on the benevolent role played by the private sector, through innovators and their followers, in stimulating as well as sustaining the whole process of rapid economic development. Thus he was against state intervention and was a keen advocate of laissez faire policy.

Thus right from Adam Smith to Schumpeter the basic interest of economists was in economic development, though the intensity of such interest, as it has already been argued out in the previous paragraph, had considerably diminished in the later period. These economists had generally discussed how a particular economy was able to start on the process of economic development or what were the forces at work which brought this about, how it was accelerated and further how there came about deceleration in the development rate which brought the entire economy to a temporary halt, and ultimately how it was recharged—the time lag of recharging was directly in proportion to the intensity of new forces that were automatically set in motion to disturb the inertia. Thus, in their analysis, though the economy was subjected to periodical fluctuations, it was continuously developing (excepting in the Marxian approach where an excessive accumulation of the organic

5. *Capital*.

6. *The Theory of Economic Development*.

capital by the capitalists would result in causing a permanent hardship to the masses as well as to the economy).⁷

As we proceed with the text, it would be noted that the classical framework no longer provides solution to the problem of economic development of the present developing economies. All these economists (excepting Marx) worked within the *laissez faire* framework. In fact, they had repeatedly warned that a serious damage would be done to the economy if the government were to interfere frequently in the economic system. Now it is generally recognised that, without such interference (or the introduction of planning) no developing economy would be able to climb up the ladder of economic development. Of course, there is the important issue of the degree of interference by the State. We are devoting a full chapter to this (Chapter VII).

The rest of this chapter is devoted to highlight the forces that have been active, in the past few decades, in arousing especial interest in the problem of development of the so-called developing economies.

Colonialism

As it could be construed from the discussion in the previous section, one of the major reasons for relegating interest in economic development into the background, for nearly a century prior to the second World War, was that a large number of countries in Asia, Africa and Latin America—which are now labelled as members of the Third World—were in one way or the other controlled by a handful of countries in the Western Europe, which enjoyed a high degree of prosperity. The economies, that they ruled, were, on the other hand, extremely poor and the major source of income of their inhabitants was subsistence farming.

7. From this it was logical for Marx to conclude that capitalism would be permanently crushed and the State, embodying the aspirations of the people, would be all powerful. However, subsequent history has belied the Marxian logic.

Despite poverty of the local inhabitants, almost all these economies were quite rich in natural (minerals and agricultural) resources. There is no surprise, therefore, that the process of colonisation was at its height when the West was undergoing a quick industrial revolution, which had necessitated the import of primary raw materials.

Besides, the products of modern mass scale industries could not have been sold exclusively in the domestic market of the Western nations which happened to be too small for these. Here there could have been no better outlet than colonies. The latter, therefore, served a dual purpose. They provided the necessary raw materials, on the one hand, and also absorbed a major part of the industrial output of developed economies, on the other.

Dualism

Thus colonies which were rich in natural resources, also became favourite grounds for ruthless exploitation by the foreigners. While this helped to promote prosperity in the Western economies, this hardly brought about any change in the economic status of the inhabitants in these colonies. Rather, a systematic depletion of the resources of the latter (especially minerals) encouraged the emergence of dualistic pattern in their development. In their domestic economy, extreme poverty (embracing the largest possible number of the local inhabitants) coexisted with exceptional affluence (confined to a few metropolitan towns controlled by the foreigners). The latter were mainly engaged in modern banking, finance, trade and business.

It would, however, be harsh to conclude from the above that because of this dualism the backward sector in the colonial economies continued to remain in perpetual backwardness. Frequent jerks and shocks were injected into the system. These, however, had failed to make any significant impact on these economies, which, by and large, continued to practice the traditional mode of production.

Dualism has thus proved to be extremely harmful for the growth of these economies.

Boeke Reconsidered

One also finds it hard to agree with Boeke⁸ that there was no escape from dualism. In his opinion, the poor (colonial) economies and the rich (Western) economies were two mutually exclusive sets of economies and they could, therefore, have no common meeting ground. In other words, dualism was a natural phenomenon and should have caused no surprise.

By arguing in this way Boeke was merely trying to capitalise Kipling's notorious version of the East and the West civilisation, (that is) "East is East and West is West and twain shall never meet." Higgins⁹ has rightly pointed out that Boeke has unnecessarily been stretching this point, that is, socio-economic difference between the rich and the poor economies. These are not mutually exclusive economies but rather mutually interdependent ones. In fact, the creation of dualism, at the international level, has acted as a great barrier to a rapid expansion of the world trade.

Even granting that what Boeke said was true, then how is one to account for the occurrence of a rapid transformation both in the outlook as well as in the behavioral pattern of the people in developing economies, after they have been exposed to the impact of modern technology borrowed from the Western countries? Does it not make a farce of the sociological dualism? Also, had not many of the Western Economies themselves suffered from this handicap when modern technology was yet to be introduced there? It was only after the introduction of such technology that a quick economic transformation took place in these economies.

Almost the same process is being repeated at present

8. J. H. Boeke, *Economics and Economic Policy of Dual Societies*, New York, 1953, p. 103.

9. B. Higgins, *Economic Development*, London, 1959, pp. 288-293.

in developing economies. So long as these were isolated from the world community and had to live on backward technology, sociological backwardness too prevailed—not because the people were so different from their counterparts in the West but because they were forced to live under a totally different environment. And once the environment was changed, these people behaved in exactly the same way as those in developed economies.

Dualism was therefore not a natural phenomenon, but it appears to have been deliberately imposed on the colonies to keep them in a state of perpetual backwardness. It was feared that if such dualism was to go, it would have caused an adverse impact on income, output and employment in advanced countries.

Beginning of the Change

A change in the attitude of the Western powers towards the colonies was, however, visible from the early part of the present century. Perhaps the most important single factor provoking this change was the fast growth of modern means of transportation and communication. These had reduced isolation both at the international as well as at national levels, and thereby facilitated the mobility of factors of production at international level.

Colonial Transport Policies—India's Case Study

As one could have well anticipated, these facilities were slow to penetrate at the colonial level. These facilities were generally created from the point of view of the maintenance of law and order and also for facilitating the export of raw materials on the one hand, and the distribution of imported manufactures within the colonial frontiers, on the other hand.

Taking the specific example of India, we find that the development of railways during the British period was done to serve these very ends. Greater attention had been given to link the major Indian ports with the principal raw

material producing centres in the interior than to link the various towns in the interior with one another. The latter, it was feared, would only stimulate local industrialisation, which was against the interests of the British manufacturers.

To make such industrialisation further difficult and also to encourage an extended distribution of the imported manufactured goods, discriminatory freight rates were charged for the movement of traffic over similar distances. For instance, a higher freight rate was charged for the movement of traffic between two points within the country than for the same traffic moving between the port and the interior point, covering the same distance.

Further, notwithstanding that the whole of the railway development was financed through raising private capital in the London market, it imposed a very heavy debt burden on the domestic economy which was quite out of proportion to the benefit derived by the local population. The government of India had also guaranteed a fixed rate of return on such movement (irrespective of whether railway companies made any profit or not), which itself was out of proportion to the paying capacity of the locals as well as in relationship to the service rendered to them.

The gain that the local economy was able to enjoy because of the commercial effect of railways was mainly confirmed to the periphery. This conclusion is a good deal different from the one arrived at by Vera Anstey.¹⁰ She stresses mainly the commercial and social effects of railways on the Indian nationals but forgets that the gain to Britain was several times larger than that had by the locals. Helen Lamb¹¹ appears to be more realistic when she says that much of the growth potential of the railways was lost when all equipment and stores were imported from the U.K. and

10. *Economic Development of India*, London, (4th Ed. 1952), New Impression, 1957, pp. 143-48.

11. *Economic Development of Brazil, India, and Japan*, (Ed. Simon Kuznets and others). See Helen B. Lamb's article on the State and Economic Development in India, Especially, p. 464.

no attempts were made to manufacture these locally. Local manufacture could have served as a nucleus for the setting up of the modern engineering industry.

Thus India's case study, which happened to be the most important British colony with extensive geographical area and a large population, suggests the limited impact of modern transport facilities on the colonial economy.

Even so, these facilities brought about several new developments in the local social and political atmosphere. For instance, it had considerably increased the mobility of the people and thereby increased their contact with their own countrymen as well as with foreigners—such contact encouraged considerably economic and political awakening among the local population.

Steam Boats and the Colonies

However, it was the opening up of the world routes to travel by the steam propelled ships, in particular, that encouraged extensive contact of those in colonies with the Western people. This proved extremely beneficial for the building up of a new perspective of the colonial problem. The enlightened foreigners were now able to have first hand information about the extent of exploitation that was being practised in these colonies and also to know about the pitifully low standard of living of their nationals. Such contact, therefore, helped in winning over the sympathies as well as the moral support of the foreigners for the colonies, who, later on, played a crucial role in pushing through the whole programme of social, economic and political reforms in these colonies.

Such contact with foreigners, as well, had a profound effect on the whole level of thinking among the leaders in these colonies. They compared the low rate of development (or high rate of exploitation) with a high rate of development to be found in the Western countries. This

was sufficient to spark off native tension. Though the initial flare ups were ruthlessly crushed by the foreigners, these nonetheless served as a good starting point for making the foreigners adopt a new attitude toward colonies. They realised that it was no longer possible for them to exploit these colonies as was done in the past.

Other Components of the Infrastructure

It might be questioned at the same time if the highlighting of the role of transport facilities in the development of developing economies means that these were the only development oriented activities in the whole armoury of infrastructure? Notwithstanding that these facilities did play an important role in internationalising the mobility of factors of production as well as of new ideas and technology, but surely one could not overlook the important role played by other components of infrastructure, especially education.

However, we are not minimising the role played by other components of infrastructure. But what we are trying to lay emphasis here is the fact that without transport facilities these components would not have made significant impact on these economies. For instance, the growth of education itself owed much to the expansion of transport facilities.

Summary

Summing up, it would be just to add that the spread of modern means of transport and communications had played the most significant role in removing geographical isolation as well as in encouraging the spread of educational facilities and modern technology.

Fresh Jerks

While global transport and communication facilities had disturbed the colonial pattern, fresh jerks were further injected into the system as a consequence of the long drawn out First World War (with its global character) and the

1917 Russian Revolution (which was hailed as a significant victory of the workers over the tyranny of the capitalists).

First World War

It was not that all the Western powers had been able to set up their colonial empires. Such a privileged position had only been enjoyed by a handful of countries—principally the UK, France, Holland, and on a smaller scale by Spain and Portugal. This, however, had been deeply resented by some other powers, principally by Germany, who could not tolerate their neighbours ruling over such a vast territory. Besides, as by the early part of the present century there was no land left which could be colonised, the situation was further aggravated. The alternative course that was now left before the disgruntled nations was to go in for a global war which could help them to establish their supremacy over the existing powers as well as on the colonies. This as much amounts to suggesting that one of the principal factors, behind the first World War, was that Germany was quite keen to gain a foothold over the French and the British colonies.

Though Germany had been defeated, the war itself had proved beneficial for the colonies inasmuch as the foreigners had adopted a helpful attitude toward these colonies. The establishment of the International Labour Organisation (ILO) after the First World War, which had accorded an honourable place to the workers in the world society, was a modest step in this direction. Further, the fact that most of the colonies had ratified the various resolutions passed by the ILO, which aimed at raising the welfare norms of the workers, was also a good indicator of the fact that foreigners had realised that they could no longer suppress the legitimate aspirations of the nationals in these colonies.

1917 Revolution

No doubt, besides the global conflict, the October 1917 Revolution in Russia had also played its role in the creation of International Labour Organisation. It was thought that

the Western democratic values, which were so essential for the establishment of free societies,¹² were at a severe stake. It was therefore essential that counter-measures were adopted to check the spread of communism.

These measures were mainly confined to: (a) promoting economic development in colonies so that income and level of living of their nationals were raised which would be a very safe way of keeping them away from communism; and (b) formulating programmes for the welfare of the people. In fact both these were interdependent for it was not possible to put into practice the programmes for the welfare of the people unless the colonies had the necessary means to meet their cost.

Summary

Thus both the First World War and the 1917 Revolution had proved extremely beneficial for promoting a new line of thinking by the Western powers toward their colonies and dependencies.

Slow Progress During Inter-War Period

Judging from the series of jerks that had been given during the early period of the present century, the progress made during the inter-war period in raising the level of development in poor countries was indeed disappointing. It appears that in the early half of this twenty-year-period the Western nations could barely get time to recover from the devastating effect of the First World War on their domestic economies. And the moment they were able to find some breathing space, they were engulfed in a world-wide depression of an intensity which was unknown hitherto. This depression, which had persisted for a very long duration, brought about a colossal suffering on the millions of

12. It is strange that while the Western capitalist economies talked of the preservation of the democratic values at the International level, they imposed a totally different set of values over their colonies.

people all over the globe. Briefly, the inter-war period, on the whole, appears to have imposed a severe strain on the world economy in general and those in the Western countries in particular, so much so that the latter were constrained from rendering any active economic assistance to their colonies.

But this could only be a partial explanation for the lack of interest in the economic development of colonies. Perhaps a far more powerful excuse was that the Western powers wanted to postpone, as far as they could, the development of their colonies, or at best adopt those measures which only touched cursorily the basic issues in their development. The adoption of such an attitude by the foreigners also appears to be due to the fact that, in view of the upsurge of nationalism in these colonies, the foreigners were not quite sure as to how long they could stay on in their colonies. Thus they generally favoured development expenditure at the minimum possible level, just to maintain the status quo in these economies.

The Second World War and Quittal by Foreigners

Foreigners would have perhaps hung on to their colonies, as they had done in the past, if the Second World War had not intervened in 1939. This, in fact, provided the final spark off for the quittal by foreigners from the colonies. This time again the pattern of war was the same as in 1914, except that besides Germany, Japan had also emerged as a new power in the East and was determined to conquer European colonies in the East and South East Asian countries.

Thus an objective analysis of the factors behind the Second World War also suggests that it was mainly the struggle between the world powers who had colonial empires (like Britain and France) or huge geographical area (like Russia) on the one hand and major non-colonial powers like Germany, Italy and Japan on the other.

The major outcome of this War was that the colonies

got their freedom much earlier than they had expected. This War, therefore, proved a great blessing for them.

The United Nations

The Second World War was as well the major instrument for the setting up of a successful global organisation—the United Nations—which is thought to be a symbol of international co-operation. (Incidentally the major factor for the failure of the League of Nations, which had been set up after the First World War, was its partisan character—being a sort of club of the affluent countries in the West. Not to talk of encouraging co-operation at the international level, this organisation could hardly have co-operation even among the member countries who, for most of the time, were at loggerheads with one another.)

The United Nations as well as its affiliate, the World Bank, have been the major instruments for promoting economic development at the international level. The framers of the charter of the U.N. had fully realised that international co-operation could not be had unless developed economies showed an active interest in the economic welfare of growing economies.

In pursuance of this, the UN has been displaying an especial interest, in developing economies, through its three-dimensional approach: (a) it sends out Missions of Experts to these countries to study the various aspects of their economies and, in the light of these studies, makes out appropriate recommendations; (b) it provides technical assistance to these economies, as it has been found that one of the principal factors inhibiting their development is the lack of technical knowledge; and (c) it provides them with necessary financial assistance through the World Bank and its affiliates, the International Finance Corporation (IFC) and the International Development Association (IDA), and thereby enables them to execute their various programmes of development.

This three-dimensional approach, in spite of its limita-

tions, has proved to be of a great help in encouraging a scientific approach to the whole process of economic development in growing economies.

This is how the UN has been functioning and has come to acquire an important status in the international affairs. Its various Regional Economic Commissions have been actively engaged in studying the various economic and technical problems faced by the member countries at the regional level and have been making valuable suggestions in the light of these studies.

Summing Up

The long spell of colonisation has been the most important single factor which has stood in the way of economic development of poor economies.

The dualistic pattern of growth, facing developing economies, has not been a natural phenomenon, but it has been deliberately created by the Western powers to satisfy their selfish design to keep the local economies perpetually depressed.

However, the fast growth of the means of transport and communications, the 1917 Russian Revolution, and the two successive international conflicts, have played an important role in bringing about a drastic change in the whole attitude of foreigners towards their colonies.

An accelerated interest in the welfare of growing economies is a recent phenomenon and it has been the outcome of these factors: (a) the emancipation of colonies from foreign rule; and (b) the dynamic role played by the United Nations in general and the World Bank (including its affiliates) in particular in their developing economies' economic betterment.

II

Some Preliminary Issues

Introduction

We shall take up in this chapter some of the preliminary issues raised in connection with the study of economic development.

It is sometimes suggested that economic growth is same as economic development, or that the two are frequently interchangeable.¹ As our analysis would suggest the two are not the same. Further, while discussing economic growth we would touch on a controversial issue, which has so frequently been debated by the growth economists; is the optimal growth path same as the full employment path? Since this has also relevance to the development economics, an understanding of this would bring clarity in the latter.

And if development is not same as growth, then what is it? How does it differ from growth? Besides, is it possi-

1. For instance, Simon Kuznets says "Modern economies growth of any one nation is a process of shifting from underdeveloped to developed groups." See *Agriculture and Economic Development*, edited by C. Eicher and I. Litt, 1964, p. 103. See also Kuznets *Modern Economic Growth*, Chapter I. According to this definition economic growth involves a change in the basic structure of production in the economy, a shift from outmoded technology to a modern one. I think this is a field that should legitimately belong to development economics and not to growth economics.

ble to develop a suitable norm to measure it? Or which is the same thing as saying, in what ways does the adoption of national income approach a superior approach to the alternative approaches available?

Defining Economic Growth

Any definition of economic growth is going to be debatable, and so our definition is open to criticism. In our opinion, economic growth broadly suggests the operation of forces which would help to maintain the growth rate of income at a level equivalent to the optimal² (full capacity) path of the economy. We would elaborate these terms used in the definition—'broadly suggests', 'maintain the growth rate', 'optimal path of the economy'.

The use of the term 'broadly' is done in view of the fact that we could at most point out the possibility of occurrence of those events which were associated with economic growth. Whether these actually occurred or not, that nobody could say.

'Maintain the growth rate of income', implies that a certain growth rate in income would be necessary for the maintenance of the steady growth path. This growth rate, in other words, would conform to that level of income where resources of the community were fully employed, or this could also be called the growth rate needed to maintain full employment.

'Optimal path of the economy' is correlated with steady growth path. That is, the growth rate should be such as to ensure an optimal use of the resources available—or, which

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2. The use of the word 'superficial' in place of 'broad' would sound rather harsh, though at one time we thought of using it. We gave it up, after considerable thought, as it would distort the operational aspect of economic growth and would make it look too vague, too far removed from reality. The use of the word 'broadly' was found harmless as it would not introduce those anomalies which were usually associated with the use of the word 'superficial'.
 3. Steady growth being subsumed in the definition—it by itself becomes superficial.

is the same thing, should encourage the use of resources at full employment level.

From the above exposition, a fundamental issue is raised. When we talk of optimal growth path, how far are we justified in suggesting—as done above (2, 3)—that it would be equivalent to full employment path? In other words, can we assume that optimal capacity—in the strict technical sense—could be no different from the full employment capacity? Further, are we justified in equating human capacity (measured in terms of the effort made as well as the input of intelligence—dexterity⁴) in the same way as we do with a machine's capacity?

Optimal Capacity

When we use the term optimal capacity, it does suggest that there is only one productivity norm in the society, which conforms to the existing (or the created) capacity. The latter being equivalent to the maintenance of full employment, if production were to be extended beyond this norm it would show cracks in the economic system—the intensity of which would be directly proportional to the degree of the excessive use of the capacity.

This might as well be put the other way round, that is, if the economic system were to operate below the existing capacity, cracks would still appear for the simple reason that at under-full-employment situation there would be non-optimal use of capacity.

Some might have serious doubts in equating technical (engineering) capacity with optimal economic capacity. They might even argue out that while engineering capacity is an operational norm—emphasising on the technological possibility of the production apparatus, the optimal economic

4. Both intelligence and dexterity would command the same degree of importance in any development model. Though dexterity is used in physical terms—for instance, how clever an operative is in production, this could nonetheless be difficult to separate from intelligence, for the latter would be reflected in the degree of dexterity exercised by an individual operative.

capacity on the other hand would merely indicate the best possible production norm for the economy which should be achieved for the maximisation of the overall welfare.

It is difficult to appreciate this sort of distinction between the two—that is, what is operationally possible in the technological sense might or might not be possible in the economic jargon. If the capacity is designed for the full employment of resources then one does not see any reason why this should not as well satisfy the alternative condition of welfare maximisation, which is already subsumed in the optimality condition. Of course it is a different thing when the capacity designed itself does not conform to the full employment situation. But then the fault would not be with the designers of the capacity but with the economists who have failed to suggest appropriate capacity.

If we accept this line of thinking then there is no difference between the engineering capacity and the economic capacity.

Human Capacity

It might be further argued out—could we also treat the human capacity in the same way as we treat the machine capacity? In other words, could we make a rational comparison between the human working capacity and the machine's operative capacity?

It would be extremely difficult to define optimal input of a labourer. All that can be said is that when a labourer's input conformed to optimal machine output then this input would be equivalent to optimal input by a labourer. This as much amounts to stating that while framing the optimal plant capacity a labourer's input that would be available for achieving this has already been taken care of.⁵

This further implies that a labourer's input is a dependent variable as much as that his performance, under normal

5. That is, labourers with appropriate technical skills have been assumed to be existing in the society or that appropriate potential for acquiring these skills is already there.

conditions, would synchronise with the technical capacity available. This is a likely possibility especially when the accumulation of technical skills over time has already created a norm—this might be the optimal norm, for the full capacity performance by the labourers, and the same has also been built into the plant design. The other possible explanation for this could be that with a rapid switch over to automation, as a consequence of advancement in science and technology, most of the manufacturing processes have been so much routinised that these do not demand especial skills from the operatives.⁶

1. Special Processes Calling for a High Degree of Deftness: One could as well approach the issue from another angle. It is found that it has been the growing scarcity of labourers that has encouraged the adoption of automation.⁷ However, this might not be the case with all processes, especially those where a high degree of operators' deftness⁸ is called for. To the extent this situation of the non-conversion of all human skills into mechanical operations prevails, it would not be possible to relate machine capacity to optimal skill norms of the labourers—that is, how much they would be able to produce if certain capacity were avail-

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6. This does not mean that the economy would be lacking in special skills—that is, skills that demand a high degree of specialisation and personal judgement. A rapid advance in science and technology would not be possible in the absence of such skills. In other words, the very creation of new techniques, which minimise the use of special skills of labourers, is itself the result of special efforts made for creating these techniques. This, in other words, means that a rapid advance in science and technology can proceed with just a routine performance by a majority of the labourers.
 7. That is, to replace as much of labour input by mechanical operation as possible.
 8. This would be different from a high degree of specialisation to which we had referred to earlier. This specialisation would be at the level of scientists and other technicians. The specialisation at the level of operator, however, is mainly concerned with his deftness—that is, with his ability to attend to a particular job which most of his colleagues cannot attend to. The job of a pure specialist, on the other hand, is to reduce as many of physical operations to the minimal level as possible, through appropriate technical changes in techniques of production.

able. Here the capacity itself would have to be tamed to the special skills possessed by these labourers.⁹

However, the above is an exception than the general rule and is more likely to be found in developing economies rather than in developed ones. In the latter most of the skills of the labourers have already been transmitted into machine capacity (in terms of optimal labour input) and as such there is not the problem of non-optimal behaviour of such capacity from the point of view of full employment. Here therefore the optimal machine capacity could be a reliable index for maintaining full employment of resources in the economy.

2. Developing Economies Need Different Tools: But when we extend the above analysis to developing economies, we would have to use quite different tools. That is, while full employment and optimal (machine) capacity still play their important role the latter would not have the same significance as in developed economies. In other words, there would have to be an appropriate synthesis of technical capacity with that of labourers' deftness,¹⁰ so as to meet the peculiar requirements of a growing economy.

Briefly, the concept of optimal capacity, as used in the growth economics, would have very little relevance for developing economies. As we analyse the development process, in the following section, we would notice that more and more difficulties are faced while using the optimal capacity approach in developing economies.

Economic Growth and Developing Economies

Returning to the definition of economic growth—given earlier, it is obvious that it would only be of an academic

9. Taming of technique to the need of operatives is another way of expressing the utter helplessness of technicians to routinise these job specifications through appropriate techniques.

10. This also suggests that individual labourer's deftness plays a far more significant role in a lower level of development of an economy than at a higher level of development where much of this deftness has already been transformed into the machine capacity.

interest to developing economies whose basic problems are so very different from those of developed economies. The former are not interested in the maintenance of the optimal growth path—corresponding to full employment of resources (which is of deep interest for developed economies), but are primarily interested in building up an absolutely new path. In other words, the basic characteristics of the two economies are so fundamentally different¹ that a totally new approach is called for while dealing with developing economies. A vigorous attack would have to be made initially on their current low level of development before they are able to reach the optimal growth path, as analysed in the previous section.

In simple language there would have to be a structural transformation of the entire economic framework in developing economies before they are able to achieve economic development. Such transformation would call for a rapid change in the existing mode of production as well as in the social norms of the society. The existing pattern of production being so much out of tune with the rapid advances in science and technology it would have to be drastically changed, if not totally scrapped. Further, the existing customs, traditions, family relations and the whole gamut of values are such a great barrier in the path of creating an economic man that these would have to be gradually modified. Economic development would therefore only occur if people show a high degree of response to new technology, education and changed economic organisation.

Occupational Shift

More and more people would have to shift from the traditional agriculture—as it gets commercialised—to alter-

1. This, of course does not mean that transformation would be a smooth process. This is bound to bring in its travail a host of new problems and generate tension in the prevailing social milieu. A society which has a greater build in capacity to absorb these disturbances would have a greater developmental capacity than the one which is slow to absorb these.

native occupations. Such occupational shift of the people would encourage rapid industrialisation. Putting it slightly differently, a rapid growth of industrialisation under such change, would itself be absorbing a large number of the labourers. There would thus be a redistribution of the gainfully employed people from the low income occupations to productive ones or from technically inferior to technically superior ones. Equally economic development would shift population from primary to secondary occupations, and, later, from secondary to tertiary occupations.

One would of course not question mapping out the path of occupational shift, as done above; but the basic question is, how much time would it take to affect occupational change?

It has to be admitted with all frankness that, if not impossible, it would be an extremely difficult job to suggest a time path for occupational change. All that can be said is that it is going to be a fairly lengthy process. In other words, the process of transformation from the traditional economy to the modern one is going to take quite some-time. Further, the economy would have to maintain a fairly high tempo of development over a long period. That is (discontinuous) development, like two|three years of high development followed by a similar period of low development, is not the subject of our interest. We are concerned with sustained development—or development escalating upwards at a fairly high speed.

Saving

When the rate of development is fairly sustained, from it also follows that the economy is as well having a high rate of saving, for, without this, it would not be possible to sustain a high rate of development. Further, saving would mostly be in the shape of domestic saving, though a developing economy could draw upon foreign saving (through borrowing from other countries) but this has necessarily to be a short period phenomenon. And the latter could only

happen if foreign saving were productively invested, so as to maximise the rate of domestic saving. This sums up to saying that a high growth rate of domestic saving is a necessary precondition of economic development.

Summary: If we knit together all what we have said above, it becomes obvious that economic development involves a comprehensive (structural) change in the economy—covering techniques of production, nature of production, as well as the social and political framework. And this change should be for a fairly long period, (of course, the timing of such a change would vary from country to country and would depend upon the level of development that has already been reached). Further, economic development is quite different from economic growth, as, in the latter, hardly any structural change is involved—rather, the economy's main concern is to maintain the optimal growth path.¹²

National Income

In the previous section a good deal of emphasis has

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12. This has already been skilfully tackled in Harrod's Model, (See for instance, Part One of *Growth Economics*, edited by Amartya Sen, Penguins). Harrod puts a large emphasis on the community's optimal rate of saving which is the key variable in the process of steady growth. If the community saves less or more than the saving warranted by the optimal growth rate of economy, then destabilising forces would be let loose, which would so distort the growth path of the economy that it would not be able to return to the position of stability. That is, once instability has been introduced it would have a perpetual adverse impact and consequently from the point of view of full employment it is necessary that the economy never slips away from the path of steady growth. Notwithstanding the fact that this model is open to objections which mainly spring from the rigid conditions of stability laid down by Harrod for steady growth, it is still relevant for developing economies in so far as it brings out the central role of domestic saving. The developing economies, trying to rely excessively on foreign saving, have often come to grief, as foreign saving is no substitute for domestic saving. The former are only useful to the extent that they promote domestic saving. If these are dissipated on consumption or on building assets of doubtful utility then these would become a big burden on the economy and thereby retard economic development. Thus Harrod's approach to domestic saving provides a good guideline for development to developing economies.

been laid on the emergence of a new income path as a result of the structural changes in the economy. From this it also follows that we have consciously been using income as a standard yardstick for measuring economic development. How far is this justified?

When we put emphasis on income as a suitable yardstick for evaluating economic development, we are at the same time suggesting that there is no better alternative measurement which could do full justice to this concept. Let us for the sake of exploration analyse the possible alternatives which could have been used but nonetheless are not being used. For instance, one could think of a high growth rate of output in physical term, or of longevity (growing life span), or of rising literacy level, or even use a purely welfare yardstick like the level of contentment of the people, etc.

Let us have a close look at these.

1. 'Output in physical units'. It is true that output in physical units would provide us with a useful measuring rod for economic development, as when output would be growing, both in aggregative as well as in per capita terms it would also be concluded from this that there has been economic development. And, if output has been rising at a very sluggish rate, it would take a very long time to achieve economic development. These are logical conclusions which would not be disputed.

However, as one probes deep certain disturbing issues come to the surface. When we talk of output, does it mean that output of all types of commodities and services could be measured by a single homogeneous measuring unit? Not to talk of difficulties faced in evaluating output of diverse commodities,¹³ considerable difficulties would have to be faced even while trying to group together the output of

13. For instance the output of steel would be in terms of tonnes, while that of oil in terms of litre and of cloth in metre. All three different measuring units testify how difficult it is to reduce these and other commodities to a common unit. Even if this were done, it would be highly arbitrary.

various products under the same commodity group." Difficulties become even more subtle when we try to measure up output of services. (Tonne kilometres of goods carried and passenger kilometres performed by travellers are, for instance, the two examples for the non-homogeneity of the measuring units used for evaluating services rendered by the same transport system.)

Thus it would be an extremely difficult job to aggregate every type of output, as no homogeneous measuring unit which could be universally applicable is available. When this is not possible, 'output in physical units' cannot be a satisfactory unit for measuring economic development.

However, some might like to pose the question, that if output in physical units declines but income in money terms rises (via rise in prices), is economic development implied? Yes, it is if we use the income approach, it is not if we use the physical output approach.

All this amounts to saying that if we were to adopt the concept of income alone, it could lead to a misleading conclusion. However, if we were to qualify income then we could escape this difficulty. Supposing we qualified that our concern was exclusively with a sustained growth in income, as a standard unit for measuring economic development, then there could be no possibility of arriving at a misleading conclusion. Under this approach, both physical output as well as income would display asymmetrical behaviour, for, a sustained growth in income could only be had if there simultaneously occurred a sustained growth of physical output. This, however, does not mean that prices would remain undisturbed. Development and static behaviour of prices would not go together. Rather a sustained growth in income itself subsumes¹⁴ rise in prices which

14. The categorisation of output of the same industry group into different quality products would make confusion worse confounded and would not lead to any rational evaluating unit.

15. The emphasis here is on some, as a rapid rise in prices is entirely ruled out.

would act as a catalytic agent for promoting further development.

As it follows from the above, when we are talking of economic development as a long term change in the income stream of the community, we should not bother about the growth of income in real terms. The growth of income at current prices would be quite a reliable index for measuring economic development, for no sustained growth in income is possible without a rise in real income.

2. 'Growing Span of Life'. People in developed economies might be enjoying a longer span of life than those in developing economies, but from this it would not be logical to conclude that the life span is in proportion to the growth in income. That is, if we were to list economies, strictly on the basis of per capita income (assuming that such an index is possible to construct), it does not mean that life span would also follow the same pattern.

It is the usual experience that people in more developed economies are far more exposed to tensions and nervous breakdowns than people in developing ones. In other words, though members of an affluent society, people in rich countries do not live a contented and useful life and their longevity is frequently accompanied by various (physical and mental) disturbances which reduce the utility of such longevity. Thus their effective life span is much shorter than warranted by the longevity criterion.

This longevity criterion would as well reduce the problem of measurement of economic development merely in terms of age which would not only be unjust but would also take us away from the central thesis of economic development which is concerned with a rapid rise in capital and income.

3. 'Level of Literacy'. The use of literacy as a yardstick for measuring development also suffers from the very defects that have been enumerated above. Granted that sustained economic development would lead to a rise

in the literacy level, from this it does not follow that unless the economy has a high percentage of literacy it would not have economic development. Even while a particular economy might have attained a high level of literacy, it might not be highly developed. For instance, people might be pursuing education not for raising the level of economic development but just for satisfying their scholastic urges. Or it might be that people are just literate—know only the A B C—but that would not mean that they have reached a high level of development.

These are mere possibilities that might or might not happen. But these do point out how risky it would be to rely upon the level of literacy for measuring the level of economic development.

4. 'General Level of Contentment'. Similarly any use of the general level of contentment concept from the point of view of measurement of economic development, does not take us far. It would be very difficult even to define contentment. Some might regard the mere possession of wealth as a positive hindrance to contentment. And those who do not have it, might also not be feeling contented.

Thus, the level of contentment is an extremely vague unit for measuring economic development. Rather, it would be appropriate to add that in the whole lot of alternative measuring units, as suggested above, this is the most difficult to handle, as it is not amenable even to approximate measurement.

After having analysed alternative criteria for evaluating economic development our conclusion is that the concept of income has a positive advantage. However, when we talk of income, do we talk of it from the point of view of a close economy or an open economy? Further, are we talking of real income or money income? And also do we talk of per capita or aggregate income?

1. The concept of income is exactly the same as used in constructing national income accounts and includes

income generated by the various sectors of the economy—primary, secondary and tertiary. Further, we refer to income in the value added sense—that is, value added to the national economy by each sector and is arrived at after deducting from the final value of output (evaluated at ex-farm or ex-factory price) the value of input items like raw materials, fuels and depreciation. Thus we use the concept of net output and not of gross output.¹⁶

2. The national income accounts include the foreign trade sector. Consequently our approach to income is in terms of open economy. Such an open economy approach becomes all the more significant for a developing economy because of its substantial dependence on foreign trade in the process of development.¹⁷

3. Besides our concern is with real income and not with money income. Of course, as we have suggested elsewhere, a long term development would mean the former. That is, such development would not be possible to have if prices were fluctuating quite frequently. However, if, at the same time, there were such terms as real income and money income and if one were asked to make a choice between the two, assuming that such choice was essential—then, of course, our preference would be for real income.

16. It would, of course, be quite true to say that in a developing economy, with a large dependence on agriculture and household types of manufacturing and tertiary activities—it would be extremely difficult to find net output. However, this should not be used as an argument for not constructing national accounts on the basis of net value added, for, we have already seen, that the alternative approaches are so much unsatisfactory that even a rudimentary income data would provide a useful guideline for development.

17. Of course, the degree of such dependence would vary from country to country. For instance, a country of the size of India might have a smaller dependence on foreign trade as compared with Ceylon where it would be fairly large. Nonetheless, India cannot afford to shut her economy from the external influence. In fact, the rate of growth of her economy is, by and large, tied to her performance in the export sector. That is how quickly she is able to import machinery and equipment, intermediates, technical assistance, even foodgrains from foreign countries, would depend on her export performance. If she is unable to have all these goods, or there is a heavy time lag in their procurement, there would be a serious repercussion on her economic development.

4. As it has also been suggested elsewhere, our preference is for the aggregate income and not for per capita income. If the former has been rising over time, then, from it, it would also follow that the latter would as well be rising. This is based on the simple logic that aggregate income would show a continuously rising trend only¹⁸ if per capita income was also rising at the same time. Further, the latter would rise only if per capita saving was as well rising simultaneously. So from this it would follow that a rising level of saving would help to raise more capital and the latter in turn would help to raise aggregate income. When all this followed sequentially then any separate mention about per capita income would be superfluous.

In brief, economic development is measurable and it is not an abstract concept. Further, aggregate real income, in the value added sense, provides a scientific yardstick for measuring this. Thus the goal of a developing economy would be how to raise the growth rate of real income in absolute terms rather than maintain it at the current level—the latter is relevant for developed economies alone.

Summing Up

While economic development is concerned with affecting a structural change in the economy, economic growth is concerned with the maintenance of the existing structure.

The process of economic development would bring about a long term change in the aggregate as well as per capita income. However, if there occurred a persistent long term change in income, it would automatically be reflected in per capita income and, consequently, any separate mention about the latter was superfluous.

Notwithstanding that various alternative yardsticks could be thought of for measuring economic development—output in physical units, life span, level of education, contentment—none, however, was found to be as satisfactory as income.

18. With due emphasis on only.

III

Agriculture, Industrialisation and Balanced Growth

Introduction

In the last chapter a good deal of emphasis was laid on the growth of national income over time as a fairly reliable index for measuring economic development. In the present chapter, we focus our attention on the role played by two major sectors of the economy—agriculture and manufacturing industry—in income determination.

The discussion on agriculture mainly centres around the issue of utilising farm surpluses for capital formation, through employing the underemployed manpower in agriculture. This, we feel, is the basic issue, for the whole process of transformation of the agricultural sector in developing economies, largely depends upon the rate at which it is able to help raise income in the related sectors of the economy.

Opinion however is divided on the issue, whether there is need for stimulating the agricultural sector through deliberate policy measures, or that it would automatically be stimulated through a rapid growth of the secondary and tertiary sectors or through growth of some isolated key

sector. We would have a close look at these arguments, while we examine the various views on balanced and unbalanced growth theories.

Agriculture

Agriculture could be divided into three compartments—(compartment one) the production of cereals and other foodgrains, (compartment two) the production of those consumable primary products on which an average consumer spends a very small part of his budget (oilseeds, sugarcane), and (compartment three) the production of non-consumable primary products which again do not constitute a sizable part of the consumers budget (cotton, jute).

Cereals

The first compartment is the most important one from the point of view of development as it is the availability of foodgrains which would accelerate economic development.¹ This is easy to see. In a developing economy foodgrain is the principal item of expenditure in an average family budget. Consequently if a developing economy wants to shake off its backwardness through surplus (both idle and semi-idle) manpower for capital creation, then it should not only have a sizable stock of foodgrains to begin with, there should also be a steadily rising output of these grains over time. Thus our interest is with the rate of growth of

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1. In the classical model of economic development, foodgrains play a pivotal role. In fact, the moment the terms of trade become favourable to the agricultural sector via rapid growth of demand for foodgrains whose output does not rise fast enough, owing to the operation of the law of diminishing returns on land, and are against the capitalist (or industrial) sector, which operates at constant returns to scale, the development of the latter would therefore gradually come to a halt. This would result in growing unemployment as well bring about an overall decline in the level of development. Almost a similar situation is to be found in the present day developing economies, where, on account of a high income elasticity of demand for foodgrains and a low responsiveness of the food sector to such demand, the terms of trade turn against the industrial sector and are in favour of the agricultural sector.

cereals over the stock already existing before capital is created.

However, the current discussion on the role of foodgrains in capital formation is mainly in terms of stock and not flow. In other words, it centres around some given stock of foodgrains—which is equivalent to what the members of the rural households were consuming before being employed for capital formation. This of course is a static approach to the vital issue of development and as we shall see soon, cannot be accepted.

1. **Existing Stock of Cereals:** Even the views presented about the existing stock of foodgrains and the methods that could be employed to collect the same from the rural households are so conflicting that a detailed analysis of the whole issue is called for before we are able to build up the alternative flow (or surplus generating) model of foodgrains.

One of the favourite arguments advanced in support of non-availability of the current stock of foodgrains for capital formation is that members of the rural households, who are left behind, would be tempted to increase their consumption of grains. Others have even expressed their fear that the withdrawal of manpower from the agricultural sector, would actually lead to a positive decline in food production. That is, there would not only be leakage in the existing stock of cereals, encouraged through indulgence in excess consumption; there would as well be a fast deterioration in the food situation in future.

2. **Leakages in the Current Stock of Cereals:** Let us analyse the first issue. There could be two possibilities for the increase in consumption by the rural householders after some members have left. It could be that those who are left behind are already suffering from under-consumption and therefore they would avail of the first available opportunity to increase their consumption. The other possibility is that a major part (or even the whole) of food surplus, now available as a consequence of the withdrawal

of certain members, would be devoted to satisfy the various ceremonial requirements of householders left behind. Besides, there might even be frequent bouts of feasting by these householders, which would make a heavy draft on the existing stock of foodgrains.

First of all, the theory of underconsumption is untenable on family farms because of the fact that even though the marginal productivity might be zero or even negative, that would certainly not mean that members were suffering from underconsumption,² for if this were so then the whole concept of family farms falls to the ground.

Besides, even if underconsumption were to be assumed for argument sake, it would be far more prevalent among the younger members than among the elder ones. And it is the younger members who would be engaged for capital formation and not their elders.³ This would therefore rule out the occurrences of underconsumption on a significant scale.

The alternative possibility of indulgence in feasting and ceremonies appears to be far more realistic. That is, when there is surplus of foodgrains, over and above the consumption needs of the existing members in the family, then there would be a temptation to indulge more frequently in such consumption. The extent of such indulgence would of course be inversely proportional to the existence of marketing facilities. If these facilities already exist then indulgence in such ceremonial consumption would be on the low side.⁴

2. We are not bringing in here the nutritional norms. Food consumption of farm households is purely in term of physical quantity and has nothing to do with nutrition.

3. This is due to the fact that (a) these people are far more mobile than the elders and (b) the nature of jobs are such that these could only be efficiently handled by younger members (for example, the work of capital formation would call for greater physical energy which only younger members have).

4. One feels that when the economy is prepared for capital formation—that is, to go in for a higher level of technological transformation—it must be having some marketing facilities.

Further, when we bring in either the underconsumption aspect or the ceremonial consumption aspect of the problem then we are no longer concerned with the stock of foodgrains existing at a particular time but rather with the flow aspect of these grains. The degree of additiveness to consumption, or to ceremonial expenditure, would necessarily involve time as well as call for a larger output.

2. Production Over Time: Would then it be true to say that over time there might be decline in the production of foodgrains as a consequence of the withdrawal of younger people for capital formation? Strangely, while in one breath the problem of 'additiveness' to consumption is brought in, it is simultaneously suggested that it might lead to decline in food production! Even in the pure static sense if members of the rural households want to increase their 'consumption', after the withdrawal of younger members, they would have to maintain the production norm.

However, a far more powerful argument for the maintenance of farm output at the base level would be the presence of incentives. One feels that it is not so much the extra consumption generated, as a consequence of withdrawal of some members from the rural households, that would help to maintain the base level output but the presence of necessary incentives. It is because the extra consumption could not continue for an infinite time. It would have its ceiling and the moment this is approached, there would be no further incentive to maintain the same level of farm output in future. This therefore amounts to saying that the glamour of feasting and occasional indulgence in bouts of overconsumption would disappear soon after the initial wave of such enthusiasm was over. Those who suggest a decline in food production, over the base level, probably have this in mind.

But then this could not be sustained, for over time farmers would not, irrespective of their being saturated with feasts and ceremonies, bring the farm output to a lower level. This is because they have got used to a particular output

norm in which they would not give up just because they want to adopt a new consumption norm. They would rather try to cash these surpluses for which there would be plenty of opportunities.

Besides, the theory of development is not concerned with the maintenance of the level of output of foodgrains over time but with a progressively rising output level, so that it is matched by the expected rate of development. Equally an optimal use of the extra capacity created through capital creation, by employing underemployed rural manpower, can only be had if there is a *pari passu* flow of foodgrains.

We feel that while so much attention has been devoted to the creation of economic capacity (or capital formation), the crucial problem of its optimal use has been relegated into the background, notwithstanding the fact that the latter is far more significant in promoting development than the former. For instance, the creation of technical capacity in the agricultural sector—transportation and irrigation facilities and all the rest that are subsumed under infrastructure—would by themselves not go far enough in promoting agricultural development.

It is further because of this misplaced emphasis on the creation of capital, rather than using it at the optimal level, that the whole approach to the problem of agricultural development has not been properly synthesised in the theory of development.

3. **Marketing Facilities:** To get back to the issue under analysis, it was suggested earlier that an accelerated development in the agricultural sector was dependent on the availability of necessary incentives, mainly in the shape of marketing facilities.

The existence of these facilities, where farmers could dispose of their surpluses at competitive prices, would be doubly beneficial: (a) These would promote monetisation of the economy and thereby break its self-sufficient charac-

ter, and (b) the extra income thus earned would provide further incentive to increase farm output, as a part of the earning is going to be invested in the purchase of farm equipment and other inputs.

At this stage one could raise these two questions. Did market facilities exist in the pre-capital formation stage? and, secondly, if they did, then why did these not promote development? Was it due to the fact that farmers were indifferent to the existence of these facilities? Or was it the case that these facilities were so inadequate that these could hardly make any impact on development?

Even at a very low level of development the economy would have some, though very elementary, facilities—like roads and market places where buyers and sellers would meet each other. The answer to the question as to why the farmers were not making an adequate use of these facilities could be found in the inadequate flow of farm surpluses. Because of the subsistence economy the farmers did not have adequate farm surpluses to sell off. Consequently, it was not so much the lack of market facilities as the non-existence of adequate farm surpluses that proved to be the major obstacle in the transformation of the economy.

However, when stimulants are thrown around in the shape of food surpluses, available as a consequence of the withdrawal of surplus manpower from the rural households, the existing marketing facilities would soon be used to their optimal level and perhaps even beyond this. This would force the Government to improve these facilities further. In fact, in the plan documents, issued by the planning authorities of developing economies, a high priority has already been given to the development of these facilities.⁵

Incentive Goods

Incentives could also be viewed in the shape of goods

5. For instance, in India's first three Plans (1951-65) one-third of the total investment in the public sector had been earmarked for the development of transport facilities

which farmers would be interested to buy with money income earned through selling from surpluses. However, some economies⁶ have suggested that if there is dearth of incentive goods—mostly consumer articles, then farmers would equally be shy to sell off surplus cereals. This would therefore suggest that in the absence of incentive goods the output in the family farms would fall after the withdrawal of younger members.

We would soon take up the issue, as to why incentive goods are not so important. Here we would like to add that initially there would be no shortage of consumer goods, as after being imported these would be manufactured locally.⁷ Also, considering a high manufacturing potential of modern consumer industries, there should be no scarcity for their products at least in the early stages of development.

Even then one might question, why all this fuss about incentive goods? Do the farmers live on consumer goods alone? They might be in less need of these goods and more of capital goods which would help them to raise productivity of their farms.

Further, notwithstanding that farmers might have been living in the subsistence economy prior to development, that however would not mean that they had absolutely no link with the money economy. They would at least have been resorting to borrowing to fulfil various social obligations (like celebration of births, marriages and deaths). Now when they have an opportunity to earn extra income,

6. For instance, Hla Myint, see *Economics of Developing Countries*, p. 131.

7. Under the colonial pattern of development, that existed in most of the present developing economies, a good deal of emphasis was laid on the import of consumer goods in exchange for primary goods that were exported, (see chapter I of this book). However in the inter-war period these goods had begun to be manufactured locally. In fact, in India a rapid growth of consumer industries had taken place right from the terminal years of the last century, and the capacity that existed in most of these industries in the inter-war period was far in excess of local demand.

through marketing surpluses, there is no reason why they should not avail of this opportunity. This would help them to discharge their obligations to the creditors. They would therefore be hardly concerned about the availability of consumer goods.

In view of this there does not appear to be much substance in the argument that since farmers do not have enough consumer goods to buy, they would react adversely to the opportunities available to increase farm surpluses.

Farmers' Response to Incentives

This as well provides answer to the other part of the question, do farmers respond favourably to incentives? That is, if there were opportunities to market farm products, would they avail of these opportunities? Our answer is yes.

Further what little empirical evidence there is before us,⁸ also supports this. Thus if marketing facilities exist and also there are food surpluses, there is no reason why farmers should not make the best of these facilities unless, of course, they do not have any interest whatsoever to earn extra income.⁹ However, they are rational beings they would be interested in increasing their income which would help them to raise the level of their welfare as well as of productivity.

Terms of Trade

But still one could pose a question, what would happen

8. For instance, P.T. Bauer's *West African Trade*, 1955, cites quite a few examples of such response to economic incentives. Also see P.T. Bauer and B.S. Yamey: *The Economics of Developing Countries*, 1957, Cambridge.

9. A likely possibility could be when the hardship involved in earning extra income through the sale of farm surpluses is much larger than the benefit to be derived. It would be so if the market place is so far off from the place of residence that farmers do not find it worthwhile to transport surpluses. However, this situation would only arise if the purchasing power of income thus earned is much lower as compared with the hardship undergone. But, as we have already argued out elsewhere, such a situation would hardly arise in a developing economy.

to such response from the farmers if the terms of trade were to turn against them and in favour of the manufacturing sector (producing incentive goods)? Would it encourage them to go back to the old subsistence (self-sufficient) economy?

There could be no straight answer to this. Much would depend upon the time lag between the creation of incentives and the occurrence of this sort of situation. If the lag is very brief then farmers might be tempted to go back to the subsistence farming. However, if we are talking of economic development, then such a short time lag would have to be ruled out. In other words, the worsening of terms of trade itself would occur with a sufficient lag. This is because, as a consequence of the large scale transfer of manpower from the rural areas to work for capital creation as well as in the manufacturing sector, a larger pressure would continue to persist on foodgrains relative to manufactures for quite a long time. The terms of trade, would therefore remain in favour of the agricultural sector during this period.

Worsening Terms might be Beneficial: This being so, by the time the terms of trade turn against farmers they would already have been so accustomed to the newly acquired standard of living that it would be most unlikely for them to revert back to the subsistence economy. Rather, the possibility is that if this happened (that is, term of trade turned against them) they would be induced to work harder so that they could turn out larger output to maintain their newly acquired standard of living.

This is another way of saying that the worsening of terms of trade, with appropriate time lags, might even prove beneficial for quickening the pace of agricultural transformation (for instance, these might encourage the substitution of capital for labour where such substitution would lead to economies of scale). The obverse of this is that such technological improvement would have been delayed if farmers had continued to enjoy favourable terms of trade

for that would have introduced a sense of complacency in them.¹⁰

Summary

In brief, our discussion hitherto has laid a distinct emphasis on foodgrains in order to demonstrate their pivotal role in economic development. It has been concluded that farmers would respond favourably if opportunities existed to dispose of surpluses over and above their consumption. However, as this prosperity would not persist over a long time, may be the rate at which the output of foodgrains grows outstrips the consumption rate, farmers might not like to specialise in foodgrains alone. Rather, with the onset of commercialisation of the economy, specialisation in agriculture would naturally be dictated by the likely return to be expected on such investment. This would provoke farmers to experiment with alternative crops which might yield a high rate of return on investment.

Non-Cereals

The growing interest of farmers in alternative crops, rather than specialise in foodgrains alone, takes us to the next two compartments of the agricultural sector. For the sake of brevity both have been clubbed together under the broad umbrella of industrial crops, though in priority determination (the compartment two)—the production of industrial crops for direct consumption, would score over (the compartment three)—the production of industrial crops not falling under the category of direct consumption.

10. It might be asked if this line of argument does not run counter to the earlier one, where it was suggested that improvement in the terms of trade offered a positive incentive to farmers? If this is true, then how would we reconcile the above argument that worsening of terms of trade would offer a positive incentive to farmers? Our arguments would be inconsistent only if we were talking of the same period (in the static sense). However, we are building up a dynamic model with emphasis on appropriate time lags. Initially, of course, the terms of trade would be in favour of farmers and once they have adapted the new standard of living the worsening of terms of trade would play the same role as improvement of terms of trade played hitherto.

We have already stated that the rate at which farmers would switch over to the production of industrial crops would depend upon the degree of commercialisation in the economy, which, in turn, is closely linked with the growth of the industrial activity. However, before the economy starts developing, it would already be having some highly developed commercial sector, and the latter is likely to be confined to exports. However, after the economy is in the advanced phase of development, this sector would by and large change over to satisfy the requirements of the growing domestic market. Of course the speed at which this happens would depend upon the elasticity of the domestic demand for industrial crops and minerals.

Government Intervention

In the initial stages of development it would be inadvisable to leave things entirely to the operation of the market forces, as these are likely to generate conflicts and imbalances in the path of development. For instance, conflict would arise when in view of the expanding international demand for certain agricultural products the free market forces encourage the export of raw materials, while for pushing up the rate of domestic industrialisation these very raw materials have to be diverted to the local market.

It could as well happen that because of the expanding international as well as national demand for certain agricultural raw materials, there emerges an imbalance between the production of raw materials on the one hand and of foodgrains on the other. If this state of affairs is not corrected in time, it could adversely effect the whole course of economic development.

In both instances there is a clear case for the Government intervention to ensure that, (a) the domestic market is able to have an easy access to agricultural raw materials and minerals, notwithstanding a lucrative export market, and (b) a high priority is accorded to the production of foodgrains even while, according to the free market forces,

their production would be less remunerative than of raw materials.

1. Promoting Industrialisation through Domestic Processing of Raw Materials: The best way to promote industrialisation, in the initial stages of development, would be through encouraging the processing of raw materials locally. But, as stated earlier, competing international demand for these might discourage the setting up of processing industries. The attractive export market would not only reduce the quantum of raw materials available for processing, the local processors would also have to pay unremunerative prices for their purchase. Thus both ways local industrialisation would be a handicap.

This situation could be considerably improved through the Government's intervention, the latter deciding how much of these raw materials were to be exported and how much were to be retained for domestic consumption during a particular period.

2. High Income Elasticity of Foodgrains: A high priority to the production of foodgrains becomes essential in view of the fact that this is the major item of consumption and thus figures prominently in an average consumer's budget in a developing economy. Consequently, unless the economy has a comfortable margin of domestic food supply, it would not be able to climb up on the ladder of development.

It might, however, be suggested that when there is not enough margin of domestic food supply, the economy could import it, in exchange export non-foodgrains or even get these on deferred payment basis. In so far as import of foodgrains is concerned, there is not enough margin in the international market. Further, if the economy were to import foodgrains on deferred payment basis—thinking that the same could be paid off when it starts exporting manufactures, it would be treading a very risky path. For instance, where is the guarantee that after the economy industrialises—which itself is a time consuming process—

it would be able to push up the exports of manufactures to foreign markets. Such export performance therefore has to be viewed in context with the strong competitive position of the established manufacturers in developed economies. Otherwise too dependence on foreign countries for foodgrains could be highly risky, for, if foreigners were to cut off such supplies in the middle, it would seriously jeopardise the food situation in developing economies and thereby affect their economic development.

All this amounts to stating that the Government would have to intervene in order to see that the production of non-foodgrains is not encouraged at the expense of foodgrains. This would call for the introduction of an appropriate price support policy so that there is not a large scale diversion of agricultural lands from foodgrains to non-foodgrains.

But such interference by the Government in the market forces, so that there is an appropriate balance between the availability of non-foodgrains for domestic consumption as well as for exports on the one hand and also there is a balance between the production of foodgrains and non-foodgrains on the other, would not be permanent feature. The issue is being discussed in detail in Chapter VII, where we rule out any possibility of the State interference beyond creating conditions for the smooth functioning of the market mechanism. Thus the interference by the State in the operation of the agricultural sector would only be up to that time till necessary conditions for the healthy operation of the free market were created. As soon as this happened the Government would relax its interference.

Minerals

So far we have confined ourselves to different compartments within the agricultural sector itself and have shown a high preference for the foodgrains sector relative to non-foodgrains. However, any discussion of the primary sector would be incomplete without bringing in minerals—notwith-

standing that some would like to classify minerals as a part of the secondary activity.

The importance of minerals could be judged from the fact that while foodgrains are the major item of consumption by labourers employed for economic development, minerals constitute the major input for basic industry which plays a leading role in economic development. Both minerals and foodgrains therefore play a crucial role in the process of development.

However, all developing economies might not be endowed with minerals, though one has to admit that nobody knows even the approximate minerals wealth of these economies.¹¹ This can only be known after a comprehensive geological survey.

Nature of Mineral Wealth

Further, it is the nature of the mineral wealth which would determine the structure of industrial growth. If an economy has a good supply of both iron ore as well as of coal, it would be more favourably placed to promote steel and related heavy industries than an alternative economy relying on imported inputs.¹²

11. It is sometimes suggested that foreigners have been very active in exploiting the mineral wealth of the colonies, so much so that they have completely exhausted such wealth. If we adopt this line of approach then it follows that foreigners had already carried out a comprehensive geological survey in these areas and thus they had a full knowledge of the minerals wealth. This is not true. First of all, the foreigners had never bothered to conduct a comprehensive survey which would have meant a lot of expenditure which they were not prepared to incur. Their main interest was to exploit those minerals which could be easily obtained. It might be that in such exploitation some areas were made barren. Nonetheless most of the mineral wealth was still intact. This has been borne from the recent geological survey conducted in developing economies. India, for instance, in the pre-Independence period (before 1947) was reported to have had hardly any mineral oil—the output of the Assam Oil Company was very small. However, since then the position has entirely changed, and at present India has emerged as a substantial oil producer. This is only one instance which refutes the exploitation theory.

12. This, however, might be questioned. Why should a large country,
(Continued on next page)

While most of the economies might not be favourably situated from the point of view of setting up of iron and steel industry (that is, they lack iron ore and coal), these however might be endowed with alternative minerals like oil, bauxite, copper, zinc, etc., which could be exchanged for iron and steel as well for other products. If the economy were not to have any mineral at all, it could still import semi-finished parts and components and process these into final goods.

Summary

In brief, though the existence of minerals is a desirable condition for rapid economic development, it is neither sufficient nor an essential condition. Developing economies lacking in basic minerals could still go ahead through importing "semis" so that these could be finally processed in the local market. Further, while the existence of basic minerals in an economy gives it a definite edge over the economy which is deficient in these, the mere presence of these minerals would however not promote economic development. Thus unless there is an integrated develop-

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without iron and coal, fail to set up a successful steel plant. Further, how are we to explain the setting up of a very efficient iron and steel industry by a small country like Japan, which because of a very heavy mineral deficiency could, according to our approach, not have qualified for the setting up of such industry? It is true that a large domestic market could provide a good base for the setting up of modern steel plant, even though the country is deficient in the basic minerals. But, surely, the cost of producing steel in this country would be higher relative to the country which has the basic inputs, assuming that both the countries are on the same efficiency frontiers. Things would certainly be a lot different in developing economies not possessing basic inputs. Here it would be a sheer waste of resources to set up successful steel industry like Japan, one has to admit that Japan is a special case as it would be extremely difficult for a country of this size to operate a successful steel industry on the basis of imported inputs. Even here it took quite sometime to set up modern steel industry. Further, as we are not concerned with the special situation, like that found in Japan, but with the general situation, our conclusion still holds true that a developing economy depending on imported inputs would not be able to set up a competitive steel industry.

ment of agriculture¹³ and industry, the existence of a large mineral wealth in a developing economy would not make much difference.

Balanced Growth

The last sentence above tells us that there has to be some sort of balance between the growth of the agricultural sector and that of the industrial sector, before an optimal use could be made of the mineral wealth in the economy. However, when we talk of balanced growth between agriculture and industry, it does not mean that there must be some uniform or standard rate of growth between the two sectors. There is, in fact, no such thing. All what it implies is that a rapid development of let us say industry, when agriculture itself is a laggard, would slow down the rate of economic development.

While in the current discussion on balanced growth emphasis has been laid on industry—even on deliberate industrialisation—agriculture has generally been overlooked. Some growth economists have even gone to the extent of stating that since agriculture has been the cause of backwardness in poor countries, it would be a sheer waste of time and resource to develop it!

Rosenstein Rodan on Agriculture

Rosenstein Rodan is an important critic of the agricultural sector. Initially he had framed the balanced growth doctrine in the context of consumer industries alone.¹⁴ As it was based on the experience of South and South Eastern European countries, one can well understand

13. Agriculture itself is a large consumer of minerals both directly as well as indirectly—*directly* because the manufacture of various items of farm machinery and components use steel, and *indirectly* because a favourable growth of the agricultural sector itself would promote rapid industrialisation and thereby help the mineral industry.

14. See "Problems of Employment and Industrialisation in Southern and South Eastern European Countries", *Economic Journal*, 1943.
(Continued on next page)

the limitations of his approach. Even then it had provided a new frame for analysing the problems of development of growing economies and also had encouraged a new line of thinking on the whole problem of external economies. Equally, by emphasising on the growth inducing effect of intra-industry expansion of the whole lot of consumer industries, a new development strategy was suggested. In other words, because of the poverty of the domestic market, the setting up of an isolated large scale consumer industry was unprofitable. If however the whole package of consumer industries were to be established simultaneously, these would promote an extensive consumer market and thereby make the programme of industrialisation viable.

Looking at it from a slightly different angle, while the iso-industry approach of the Marshallian type failed to promote economic development, a cluster of consumer industries was sure to be successful in breaking the vicious circle of poverty. This approach carried significant policy implications, the major one being that development must be consciously encouraged through the offer of suitable monetary and fiscal incentives. This was due to the fact that the conventional market mechanism would fail to carry out this mission.

Here one gets the preliminary glimpses of the capitalist planning model in the industrial sector. Under this approach the role of the Government would mainly be that of 'impulse generator'. That is, it has to adopt measures which would promote such a pattern of industrialisation in the private sector. Further, how this growth impulse was to be induced was left to the choice of the individual economy, for it was rightly pointed out that there could be no universal prescription for this.

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Big Push

Rodan, however, had soon realised that his consumer industry model was no match to tackle the structural change problem of developing economies. Here in fact a model of different vintage was called for. He had accordingly completely overhauled his previous model so as to accommodate, besides consumer, heavy industry as well as infrastructure facilities. The only sector that was deliberately omitted was agriculture.

Rodan has christened his latter version of balanced growth as Big Push¹⁵ and has added that unless developing economies are prepared to exert push of this force, there will not be any break off from the vicious circle of poverty.

If Rodan had deliberately neglected agriculture in his theory of Big Push and had laid all emphasis on industrialisation, the same is equally true about Leibenstein.¹⁶ In his critical Minimum Effort thesis, he has impliedly relegated agriculture into the background. Equally in Rostow's take off¹⁷ thesis it is the manufacturing industry again which plays a crucial role in economic development.

Rostow, Rodan and Leibenstein Reconsidered

So all three treat agriculture as a second rate sector:

Rostow: Starting with Rostow one feels that there is a tone of oversimplification when it is suggested that the process of take off into self-sustained growth is primarily associated with leading industries (referring to those indus-

15. P. N. Rosenstein Rodan, *Notes on the Theory of Big Push*, *Economic Development for Latin America*, ed. H. S. Ellis, London, 1951. Reprinted in abridged form in *Leading Issues in Development Economics*, (ed.) G. M. Meier.

16. H. Leibenstein, *Economic Backwardness and Economic Growth*, 1957. See Chapter VIII.

17. W. W. Rostow, *The Stages of Economic Growth*, 1960. Rostow presents a five-stage model. In the first phase there is the traditional society'. This is followed by the creation of 'the preconditions for take off', next follows 'the take off'; next there is the 'drive to maturity'; and finally there is 'the age of high mass consumption'. However, it is the take off stage which is the most important stage.

tries which have a large growth inducing as well as growth promotional effect), and further that agriculture by its very nature cannot qualify for this.

But why should it be so? No definite answer has been given by Rostow.

Further, finding a uniform trend in the occurrence of past take offs, Rostow concludes that future take offs cannot be different. Therefore the major forces behind the occurrence of take offs in developing economies are going to be very much the same as were found in developed countries at the time of their take offs, except that the time taken to have it would now be considerably shorter. Further, since agriculture did not figure prominently in the past take offs, the same is going to hold true about developing economies.

However, one finds it hard to agree with the suggestion that agriculture did not play prominent role in the past take offs. In fact, the contribution by agriculture in these take offs was in no way less significant than made by other leading sectors. Rather a rapid development of these sectors itself was closely linked with a rapid transformation of the agricultural sector.¹⁸

Thus not only Rostow's three dimensional approach¹⁹ to the historical take offs is to be modified by adding up a new dimension—the dynamic role of agriculture, extra stress as well has to be laid on this sector in developing economies. Here the development of agriculture would have to be accorded the highest priority.

18. This point has also been brought out by Shigeto Tsuru in his analysis of the Japan's take off. See *Economics of Take Off into Self Sustained Growth*, edited by W.W. Rostow, Macmillan, London, 1963.

19. This is : (1) a rise in the productive investment from say 5 per cent or less to over 10 per cent of national income (or net national product (NNP)); (2) the development of one or more substantial manufacturing sectors, with a high rate of growth; and (3) the existence or quick emergence of a political, social and institutional framework which promotes modern capitalism and gives to growth an on-going character. See W.W. Rostow, *The Stages of Economic Growth*, 1960.

Rodan: Rodan's prescription of balanced growth, minus agriculture, sounds like pudding without sugar. Further developing economies can ill afford to invest their scarce funds in a complete package of secondary and tertiary activities. Lacking expertise as well as a sufficient domestic market, investment in these activities would be tantamount to mispending borrowed resources and thereby imposing a heavy debt burden on the poor economy.

They would as well be ill advised to leave agriculture to its fate, hoping that it would automatically pick up with the growth of other sectors.

Rodan's balanced growth therefore is not all that balanced. It is a peculiar mix of balanced as well as unbalanced growth. In so far as the development of the non-agricultural sector is concerned it is a balanced growth approach but when it comes to the development of the agricultural sector vis-a-vis the industrial sector it adopts an unbalanced growth approach.

Balanced growth in the non-agricultural sector—according to Rodan—is needed in order to correct imbalance in the agricultural sector itself. But what if with this approach, the imbalance in this sector were to grow further? And, this is the likely consequence after the Government adopts a deliberate industrialisation policy, where the growth of the manufacturing industry far outpaces that of agriculture. This situation, instead of narrowing down, would further widen imbalance between agriculture and industry.

Leibenstein: Leibenstein is equally indifferent towards agriculture. He laments that it is the excessive dependence on agriculture as well as the use of primitive techniques of production, which have been the major factors responsible for the stagnation of poor economies. The only effective approach to counter such backwardness, in his opinion, is to accelerate investment (in industry). He is, therefore, all praise for a large frontal attack without which the economy would not be able to break its backwardness. But when

such investment is to be made and what is its size to be has not been spelled out by Leibenstein.

While claiming to formulate a dynamic theory of growth, the tools that Leibenstein uses to achieve this end are essentially static in nature. He believes that unless the concerned backward economy starts high up on the per capita income path, there is every chance of its slipping down to the state of low equilibrium level—corresponding to its initial poverty path. Later on²⁰, of course he has been more realistic and has modified his initial stand by stating that the upper (high) income level, which was needed for initiating the process of self sustained growth, could be approached via breaking investment into two segments. However, the initial investment itself should be fairly high, rather close to the self sustained path, so that the final dose of investment could be introduced at a level where the initial growth inducing effect of the previous investment had already created sufficient momentum in the system.

Insofar as developing economies are concerned, their vicious circle of poverty would not be so easy to break as with the mere injection of heavy investment. In fact, it would be difficult to attain a high per capita income itself without first having a breakthrough in the agricultural sector. Further, any talk about the growing nutritional norm, a necessary condition for economic development as admitted by Leibenstein himself, will be meaningless when per capita availability of food is not rising because of the laggard behaviour of the agricultural sector.

Unbalanced Growth

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After all this discussion, where do we stand? Since balanced growth has not been helpful in solving the development equation of the growing economies, could the solution be found in following just the opposite path? That is, un-

20. See Chapter 15 (Economic Development Theory and Investment Policies), *Economic Backwardness and Economic Growth*.

balanced growth. Or could the approach to balanced growth itself be so modified that it becomes rehabilitable in context with the special requirements of developing economies.

Unbalanced Growth and Developing Economies

Hirschman's Version: The major exponent of unbalanced growth is Hirschman.²¹ He has presented a neat exposition of this theory. In fact, he was bold enough to take cudgels against the balanced growth theorists at a time when they had almost created a monopoly for themselves. He suggested that the salvation of developing economies did not lie in following the balanced growth path but rather the opposite—the unbalanced path—which was the only feasible path for encouraging an optimal use of their scarce resources. He particularly articulates the role played by one or two core industries in his model of unbalanced growth.

By stating this, Hirschman has presented a new version of the traditional external economy theory. Instead of talking in terms of **any** single industry, as done by Marshall, he has replaced it by a **particular** industry approach—especially the one which enjoys dense linkages with other sectors of the economy both in the shape of a large buyer of inputs (backward linkages) as well as a large seller of final output (forward linkages). With this emphasis on particular (basic) industry approach in investment allocation, the economy was doubtlessly deliberately unbalancing the path of its development.

By implication, balanced growth is a luxury which poor countries can ill afford to indulge in. They have to be extremely choosy in investment allocation. Those projects should be selected which promised a high rate of overall development. And here Hirschman suggests the use of an inter-industry table—which would tell the degree of back-

21. A. C. Hirschman, *Strategy of Economic Development*, 1958.

ward and forward linkages among different industries. Those industries should be deliberately marked for investment which show dense linkages.

Hirschman feels certain that once the economy is systematically unbalanced, the likely emergence of the various pressures and technical bottlenecks would automatically attract further attention as well as investment in the affected sectors and thereby cause growth multiplying effect.

The exact course of this path would be something as follows. When a leading industry—say steel (also Hirschman's favourite)—is established it would generate demand for the basic inputs—iron ore and coke which, in turn, would lead to the development of the mining sector. Further, as these inputs would have to be transported from mines to the steel plant, there would emerge demand for transport—roads, lorries, railways—which, in turn, would lead to investment in the transport sector. Besides, steel being the major input item in a large number of activities like construction, machinery manufacturing, engineering etcetra—in fact, all sectors of the economy make use of steel in one shape or the other—its production would therefore encourage an all around economic development. Consequently, once the pressures emerge in the economy, as a consequence of a large production of steel, all the inter-related sectors like agriculture, manufacturing industry and transport would be automatically activated.

Hirschmanian world is therefore loaded with pressures and still more pressures. Further the pressures are of such nature that these encourage an all around development. Thus the economy has merely to set up industries which have maximum pressure generating potential and stop at that. The rest would automatically be taken care of.

Evaluation : However, such automatic functioning of the economy as a consequence of initial pressures emanating from excess output from certain key industries, has to be questioned. Such initial pressures might not work up.

Rather it might be that such pressures, instead of leading to follow up action, might end in a state of disaster.

Even though the economy might have succeeded in setting up a successful basic industry (steel) and also have come up with the user industries, let us say those producing farm equipment, things might fail to move beyond this point. Farmers, who are the sole users of farm equipment, might not purchase the same for one reason or the other. Therefore, while the economy is now enjoying a larger output of steel and also of farm equipment, it does not necessarily follow from it that this would lead to a larger output in the farm sector. In this case unbalanced growth strategy would certainly prove to be a dangerous prescription for developing economies.

It is the automaticity assumption, in the unbalanced growth strategy, which takes away much of the strength from it. Things in the real world do not work up in this manner. Besides, if the Government were first to wait for the emergence of pressures and only then do something, it might be too late.

Under planned development, on the other hand, the government would have to take an overall view of the development process and encourage a harmonious development, which would not, at the same time, imply that the government should do each and everything. But the Government would certainly have to create an appropriate investment climate before hand as well as provide the infrastructural facilities for without these rapid development would just not be possible.

But then this is quite different from Hirschman's unbalanced strategy, where the development of complementary sectors should be postponed till pressures have fully worked themselves out.

Balanced Development

Where do we head after all this rigmarole with balanced and unbalanced growth? We are certainly not left with any

other alternative but to provide a new approach to balanced growth so that it is made rehabilitable in the context of special problems of developing economies. In the conventional definition of balanced growth—as we have noticed earlier—agriculture has been given almost a cursory treatment and some of the economists have even gone to the extent of deliberately sidetracking agriculture, thinking that it would be a mere waste of time and energy to rehabilitate it.

One feels that the existing approaches of balanced growth have this major drawback and unless we are prepared to accord a respectable place to agriculture in the growth theory, there can hardly be any balanced growth. Many of the ills from which developing economies suffer at present, could be removed partially if not wholly, if they were to take a good care of the agricultural sector and were also not so keen to run after deliberate industrialisation of Rodan or Hirschman vintage.

But all along we have been talking of balanced or unbalanced growth. Our primary interest however is not with growth but with development. We would therefore be doing injustice if we talked of development through balanced or unbalanced growth, as has been done by the economists we have analysed above. We have to introduce a new concept of balanced development and when we do so a different approach to the problem of development is also suggestive. However, this is the subject for our discussion in the next chapter.

Summing Up

A continuing rise in foodgrains production should get the foremost priority in the theory of economic development. We therefore cannot use a static production approach to foodgrains for capital formation as is being done in the current discussion of the problem. It is basically a dynamic problem and must be viewed in this perspective.

Notwithstanding that both cereals and non-cereals occupy equally important role in the agricultural economy, however from the point of view of economic development non-cereals would not only occupy a low priority vis-a-vis cereals these would also have a low rating vis-a-vis minerals.

A rapid development of both agricultural as well as mining sectors is inter-related with the performance of the manufacturing industry. However, the current theories of balanced and unbalanced growth lay a large emphasis on industry, and generally ignore agriculture. Some even go to the extent of suggesting that since it has been the sole cause of the backwardness of the economy, it should be deliberately neglected. However, as our analysis suggests, this is a very wrong approach, as without according an honourable place to agriculture in the theory of balanced growth, there could not be sustained economic development.

Considering the fundamental weaknesses of balanced and unbalanced growth theories and also of the whole approach to the utilisation of farm surpluses for capital formation, we have suggested an alternative approach of balanced development, which is spelled out in the next chapter.

IV

Balanced Development, Investment Criteria and Choice of Techniques

Introduction

Our exposition of balanced growth in the previous Chapter, has shown that a sustained expansion in income cannot be had through the current approach to balanced growth and least of all with unbalanced growth.¹ As such these cannot offer a satisfactory solution to the development problem of developing economies. In this Chapter an attempt is made to develop the alternative concept of balanced development.

As we try to develop our thesis of balanced development, we would also be meeting problems of investment criteria and choice among alternative production techniques as a part of this theory, which have also been examined.

Balanced Development

Without mincing words, we would state that balanced development implies a harmonious inter-sectoral develop-

1. It is not clear whether those who developed these approaches did so merely for the sake of intellectual exercise or had in their mind the problem of development of poor economies. In fairness it might be added that they attached a higher weightage to the former than to the latter.

ment which yields a sustained growth in income over time. As it would be noticed, this definition of balanced development runs into the territory of economic development (as defined in Chapter II). The two definitions, though worded slightly differently, ultimately aim at the same, goal, that is, yielding a sustained growth in income.

Harmonious Intersectoral Development

Let us try to understand what is meant by 'harmonious intersectoral development'. This implies a systematic development of all sectors of the economy so as to even out pressure inherent in the development path. However this, at the same time, does not imply that all sectors are developing at the same (or uniform) rate.² That is, if the overall rate of development is 5 per cent then it does not mean that all sectors of the economy are growing at the same rate.

1. **Sectoral Growth Rates:** This is just not possible as different sectors would have different weights in the development strategy. For instance, it might be perfectly logical for the agricultural sector to grow at the rate of 2.5 or 3 per cent annual and the manufacturing industry at the rate of 8 to 10 per cent annual and infrastructure at a still higher rate of 12 to 15 per cent.

All this follows from the relative weights that different sectors would command in the economy. Since agriculture is the largest sector, responsible for three-fourths of the aggregate output (in some economies even more), its relative growth share in the overall expansion of income would be lower than, for instance, the manufacturing industry, which generally accounts for a small fraction of output in a growing economy. Agrain within the framework of the manu-

2. This is quite different from talking of balanced growth within the same sector, which would imply inter-industry balance in the output structure of that sector. Of course, the interindustry approach is equally valid in a generalised development model which cannot be framed without the use of such technique. However, when we particularise the role of input-output relationships in a sector, rather than in the economy, then we are emphasising the especial role of this technique from the micro point of view.

facturing sector the weight given to heavy and basic industry would be much larger than that given to the consumer industry. Since rapid advances in agricultural and industrial sectors would be imposing a heavy pressure on the existing services the latter would therefore have to grow at a still faster rate. Consequently differential sectoral (as well as intra sectoral) rates would be perfectly logical within the framework of balanced development.

Still, it might be asked as to what sort of development rate can be used intersectorally so as to build up the theory of balanced development? There cannot be any straight answer to this question for the simple reason that this cannot be discussed without reference to a particular economy and as well as without a prior understanding of its peculiar problems. (If all growing economies were a homogeneous group of countries then the task would become quite simple and a particular model of development could have the universal application. But, unfortunately, these economies display a great deal of non-homogeneity in resources as well as in the level of development that they have already attained.³

2. A Part of General Theory of Development: Briefly, therefore, harmonious intersectoral development is a part of the general theory of economic development. In other words, targets in different sectors would have to be so framed that these are matched with the rise in the end national product. Further, as balanced development is intended to yield a sustained growth rate of economic development, it follows that the planned rise in income should also be maintained for over a sufficiently long period. However, as the above analysis points out, great care is needed to plan intersectoral development rates—which are in perfect harmony with the overall rate of development. This obviously is the task of specialists and cannot be left to mere hunches and guesses, as generally is done at the moment.

3. It is here that intensive work is needed before a proper strategy of development could be built up. For instance, a proper survey of the resources is a necessary precondition to the building up of rational growth rates.

Investment Criteria

The superfluousness that one encounters while analysing current approaches to balanced and unbalanced growth, is also found while one tries to analyse current approaches to investment criteria and choice among alternative techniques of production. Like balanced development, we confine ourselves in both these fields to achieving the goal of harmonious intersectoral development.

There are two major strands in the current literature on investment criteria—one which falls under the name of maximisation of social marginal net product and the other which is concerned with the maximisation of the rate of growth (or which is the same thing as maximisation of profit reinvestment) with appropriate time lags.⁴ However, to infer from this that the first approach is completely lagless would not be true. It also involves a time lag, though it is of a shorter duration.

By adopting this line of approach it might be said that the social marginal net product criterion is a short period phenomenon while the alternative one is a long period phenomenon. Further, when emphasis is put on the former (social marginal net product), it logically follows that those investment projects would be selected which promise maximisation of national income as well as which would take care of its extended distribution so that the largest number of the people in the community benefit. All this would of course happen within the prevailing constraint of capital in the economy. In other words, those techniques of production should be selected which would help to maximise the input of labour—which is an abundant factor, and minimise the use of capital—which is a scarce factor.

There is, however, the basic conflict between the maximisation of income and of its distribution. For instance, when emphasis is laid on the techniques of production

4. A large body of literature exists on investment criteria. The issue had attracted especial attention in the 1950s and early 1960s.

which would maximise the output of labour or encourage the use of labour intensive techniques of production—we should not overlook the fact that labourers⁵ are also the consumers of a large part of the output thus produced. This would therefore affect the rate of saving needed to yield a larger income in the next time point. Consequently both maximisation of employment as well as maximisation of income could not go together simultaneously. There could only have been one of the either but not both. This is easy to understand. There could hardly be any possibility of maximisation of surplus through the wisest distribution of income if employment at a low level of production were to be maximised. It is not that labour intensive methods are incapable of generating a surplus but the rate at which the surpluses would be generated through these methods is not going to be large enough to promote rapid income distribution.

Growth Oriented Approach

The difficulty with the alternative approach⁶ is that it is excessively development oriented, although one is never sure how much of economic development could be had through pursuing this approach. Rather, it might be that an excessive involvement with investment projects with high capital intensity and a long gestation period might even fail to generate any economic development. This could be due to the fact that investment made in projects, providing a high rate of return on an uncertain future date, might prove abortive in a growing economy. Besides, as the time lag involved in obtaining optimal output from these projects is

5. We make a slightly different distinction between labour and labourer than what has been suggested by A. K. Sen (see *Choice of Techniques*, Chapter I). In our case labour refers to the input of labour effort at a time that is, unlike Sen we do not discount it with time.

6. Leibenstein is one of those who stress the dynamic role of capital deepening which would maximise rates of profits as well as of growth. See W. Galenson and H. Leibenstein, *Investment Criteria. Productivity and Economic Development*, *Quarterly Journal of Economics*, August, 1955.

excessively long, such investment might not at all appeal to the growing economies which are looking forward to those projects which yield both quick as well as effective results. The goal of profit maximisation and also that of growth maximisation, inherent in this criterion, might prove more illusive than real.

Between the two approaches, the latter puts a larger emphasis on industrialisation, as impliedly a high growth rate could only be achieved through investment made on projects which promise a high rate of industrial growth. This is again based on the experience of more developed economies where a high growth rate is generally associated with rapid development of basic industry. However, if one were to probe deep into it (that is, association of growth rate with basic industry), it would be seen that this is only partially true. Behind this facade of high industrial growth lies hidden all the investment and effort made to strengthen the agricultural sector.⁷

Agriculture and Marginal Social Net Productivity Criterion

A high degree of capital intensity in agriculture is hardly feasible in growing economies where the land-labour ratio might be such as to cause a high pressure on land.⁸ The same may be true about other sectors—though perhaps to a lesser degree.⁹ But this is quite different from

7. The trouble is that while suggesting a particular investment approach—here of course a capital deepening one—the only period used for having it is the one that follows the take off phase in developed economies. However, if one were to analyse the take off phase itself or go to a period prior to take off, one could not fail to notice the dynamic role played in it by agriculture and even by simple consumer industries.

8. Even in economies where man-land ratio is supposedly somewhat comfortable, it is unfortunately not comfortable in the real sense. That is, though land is abundant good land, which would be brought under cultivation, is extremely limited and further a prohibitive cost would have to be incurred to convert the wasteland into cultivable land. Thus even land-abundant developing economies do actually have a restricted cultivable man-land ratio.

9. When agriculture is a difficult sector in the sense that it precludes the use of capital intensive technology then it is easy to conclude

suggesting that a high growth rate in agriculture could only be had by adopting the marginal social net product approach. That is, with given factor endowment in a growing economy, an equidistribution of resources among the agriculturists would automatically maximise output.

This of course is an oversimplification, for, nothing could be said a priori whether farmers would hold out an encouraging response to such distribution of resources. It is more probable that, within the prevailing framework in developing economies, they would be less responsive to such a stimulant. Thus, unless the whole framework is drastically changed, through appropriate policy instruments, any equi-resource distribution among the farmers would not improve matters.

The marginal social net productivity approach to development does also suggest the substitution of large farms by small ones for reasons of productive employment and also for obtaining a higher total output. This is further based on the assumption that the very existence of large farms would act as a positive hindrance to economic development.¹⁰ That large farms should act as a positive hindrance to development sounds rather peculiar. This would only happen under these circumstances: (a) these farms are owned merely for prestige purposes and are therefore not cultivated, (b) these are leased out on the tenancy basis and the tenants have no incentive to work on them, and (c) the income derived from these farms is mis-spent by their owners.

(Continued from previous page)

that manufacturing industry should be capital intensive. However, when industry is made excessively capital intensive, this, instead of saving the land problem, would rather complicate it further. This is because such an industrial pattern, possessing a limited employment potential, cannot bring about a rapid transformation in the agricultural sector.

- 10 Incidentally this sort of stand has also been taken by the growing economies, where the whole machinery of land reforms has been used extensively to break down large farms which have been considered unproductive.

Behaviour of the Landed Aristocracy: Perhaps it is the last factor than the other two which has made the landed aristocracy an object of special attack for obstructing the whole process of economic development. Also, the second factor—a depressing agrarian climate for the tenant cultivators—is to be linked with the behaviour of the aristocracy. That is, the landed aristocracy acts as a major obstacle in the introduction of new innovations in the agricultural sector. Consequently, if big farms were split up and distributed among the tenants in small bits, equivalent to what they would have got under the tenancy arrangement, technological transformation in this sector would be promoted.

Whether this would actually happen or not nobody knows. However, arguing in this manner would amount to putting the entire blame for the lack of capital formation in agriculture on the behaviour of the aristocracy which has been far more concerned with conspicuous consumption than with capital formation. I think this is an extreme view and not a correct assessment of the agricultural situation under the aristocracy. Instances could be easily cited where quite a few members of the aristocracy had evinced a keen interest in the development of agriculture, and further, a sizable part of the income derived from this sector had been devoted for creating capital assets in the economy. Equally, if the aristocracy has been indulging in consumption rather than promoting capital formation, one has more to blame the peculiar domestic economic situation, with lack of investment opportunities, than anything else.

Under these circumstances, should the blame be put on the aristocracy? Or on the lack of an appropriate industrial climate? One really does not know. But then, what is the guarantee that if farms were broken into small units and distributed among small farmers, the latter would make the best of the changed situation?

Alternative Criteria in Industry and Infrastructure

Problems of equidistribution of investment among the

entrepreneurs in the manufacturing industry (essential for social justice) are still more complicated. First of all, because of the technological constraints, which call for the minimum size of investment, any possibility of equidistribution of investment has to be ruled out. Even here it might be possible to break capital into small bits—for instance, in consumer industries—it might not be a desirable course, for it might lead to a fall in the efficiency and increase in technological backwardness.

While the manufacturing industry might allow alternative technological choice (though in a very restricted sense), this would not at all be possible in the infrastructure. Here the investment would have to be of some minimum critical size and must be made simultaneously on different fronts.

Summary

Briefly the above discussion is a clear pointer to the fact that marginal social net productivity approach suffers from inherent contradictions as well as is unrealistic in its approach to the problem of economic development. But the alternative growth maximisation, through the creation of basic industry capital, is still worse as developing economies cannot afford to experiment with a highly capital intensive mode of production.

Then where do developing economies stand? What type of investment criterion should they adopt for fostering economic development?

Choice of Techniques

Before we discuss this, let us connect the discussion in the previous section with the choice of alternative techniques of production. Such choice is an integral part of the investment criteria, for, while the latter is supposed to provide an overall guideline for investment, the former (the choice of techniques) as its very name suggests would provide among the alternative techniques that technique which

would help to optimise the rate of development.¹¹ In other words, while the former is supposed to act as the principal guiding force behind economic development, the latter is thought to provide an effective via-media for achieving it.

As choice of technology provides one of the major policy instruments for achieving economic development, it naturally occupies the core position in this process. Thus every economy has to choose appropriate technology which would yield the desirable results.

From the earlier discussion of investment criteria two sets of technological choices are broadly suggestive, (a) labour intensive, and (b) capital intensive. The former, as it has already been noticed, puts a large emphasis on employment (which is the same thing as spreading the limited capital available among the largest number of people), the latter on the other hand emphasises on investment deepening (or restricting employment of labourers).

This could be the simplest possible approach to the technological choice problem, which is free from intricacies. However, as we fish deep into the whole issue, we find, this is not so. Certain questions crop up. For instance, is it possible to have technological choice conforming to factor intensity of the economy? In other words, is it correct to assume that techniques are so easily available as to conform to different degrees of labour and capital intensities?

Though it might be possible to have such choice in pure theory,¹² operationally it would be extremely difficult

11 The problem is also one of optimising employment and output. We use the term optimisation and not maximisation because, while it might be possible to maximise employment with a given technological choice, it might not yield optimal development path. The latter could only be built if due emphasis was put on the optimisation of the development path, that is, achievement of the goal which promised a rational use of both capital and labour.

12. A K. Sen has skilfully analysed this problem in theoretical framework. He also admits that in actual practice neither the production function would be continuous nor would it be possible to suggest techniques conforming to a particular production function. However, the framework that he suggests has very little relevance to developing economies. See *Choice of Techniques*.

to have it. And ironically the problem becomes more complex as we move from simple consumer industries to consumer durable and from the latter to basic and heavy industry. The range of technological choice therefore as we move high up on the scale of industrial production, is limited because of indivisibility in production and also because of the high cost involved in prospecting alternative techniques.¹³

Thus when we refer to choice of techniques, a clear distinction has to be made whether it refers to consumer industry or to capital industry; and in consumer whether it refers to durable or non-durable consumer industry; and further within capital industry whether it refers to the manufacture of simple, medium or more complicated capital goods.

Being an intractable issue, economists have often been tempted to approach the problem of technological choice purely from the macro point of view. But this sort of approach, as we have already noticed earlier, hardly makes sense and helps us least in building up a development path. A developing economy is going to raise a series of questions; foremost would be, can it really have a choice in techniques in accordance with its own peculiar economic conditions?

It is obvious that the degree of freedom available, in technological choice, is extremely limited.¹⁴ Would it not therefore be better if the term 'choice' is totally eliminated and instead replaced by 'technique with particular rated capacity'?

13. For instance, the technology of a steel plant, though not permanently fixed, is also not easily changeable. Such change would call for a heavy investment in research which could only be financed by a large corporation or by the Government. Even if a change in technology is suggested, after a prolonged period of research, it would not be easy to incorporate it into the steel plant, for the latter would push up rapidly the rate of obsolescence which the economy might not be in a position to afford.

14. Some might argue out that this would not be correct in so far as the whole field of consumer industries is concerned, where the range of alternative production possibilities is fairly high. However, this is again a myth. In actual practice the degree of freedom available here also is not substantial.

This is because the word choice is deceptive as it connotes the existence of a wide spectrum of techniques. Equally, the word choice is very vague as it is not possible to particularise technology and the latter is very significant for economic development. Here the emphasis has to be on choosing a particular technique having relevance to the economy under consideration¹⁵ and not having a plethora of techniques which in any case is more elusive than real.

Further, in the conventional approach to the problem of technological choice, the emphasis is mainly on these two parametres—labour and capital. It is the degree of intensity of the two which provides us with different vistas on the problem. Technology might be labour using and capital saving; or it might be labour saving and capital using; or it might be labour neutral and capital using; or capital neutral and labour using; or both capital and labour neutral; and so on, one could think of a number of possibilities.

Two questions straightway arise. (a) Is technology exclusively based on capital and labour and (b) what is the operational significance of the various combinations suggested by these two parametres?

Capital and Labour

When we put emphasis on the role of capital and labour in technological choice then we are also assuming at the same time that the terminal output that would emerge from a given technique is primarily the function of these two parametres. This is all right in so far as the classification of various techniques is concerned (that is, labour intensive, labour saving, capital intensive, capital saving, etc.). But in

15. One of the significant decisions that has to be made by a developing economy while choosing a particular technology is the pay off function of this. A developing economy cannot afford to postpone pay off for an indefinite period. In view of the tight resource position, such an economy would have to take a cautious stand in the matter. Here the capacity approach to technological choice would definitely yield favourable results than could be had by adopting choice in technology approach.

a growing economy the problem would have to be approached from a different angle. Here the major bottleneck is to be found in the availability of basic raw materials necessary for achieving the planned output targets.¹⁶ When we use a particular technological approach, as alternative to technological choice, the problem of working capital would automatically be subsumed in this as the rated capacity would not be achievable unless it was matched by the contra flow of raw materials.

In the conventional technological approach, this aspect of the problem is generally neglected, not being of much significance in developed economies. However, this is not so in developing economies. Here the availability of raw materials (or working capital) cannot be taken for granted. It has to be made an integral part of the selection of a particular technology. This is the basic reason why emphasis has to be put on a particular technology.

Further, a particular technique is to be treated in terms of labourers employable and in a more refined term, labour time, used in terms of final output that can be obtained. I feel that distinction between labourer and labour time has been given undue weightage.¹⁷ In developing economies it is more important to know how many labourers (in pure number) could be employed through using a particular technique. As to what they are capable of producing has already been determined by the rated norm of the technique, thus making the concept of labour time superfluous.

16. In other words, in the conventional technological approach both fixed capital and labourers are considered to be the basic inputs used for producing given output and so choice among alternative techniques is made from the point of view of availability of these two inputs. However significant a role these might play in determining final output, these by themselves cannot create output. The two factors combined in technological choice could at best be the instruments in creating output but would not create optimal output unless these were efficiently combined with stocks of raw materials (or inventories).

17. Especially by A. K. Sen. In his view when we talk of labour it refers to labour time and we talk of labourer it refers to actual worker. So he thinks both labour and labourer should be properly distinguished, see also f.n. 5,

However, when the problem is that of choosing between one technique which is wasteful of labour time and another one which is not, perhaps the concept of labour time becomes significant. But this is again begging the question. For instance, why has a technique, which is wasteful from the point of view of labour time, been in use? It could only be so if no alternative techniques were available. Therefore, the word choice becomes meaningless! However, if the reference is only to a technique at a given time, which has supported more manhours than desirable, then we are again assuming that because of the lack of alternative employment opportunities or the lack of alternative technological choice more labourers were allowed to work than were needed.¹⁸

Choice Among Alternative Combinations

Once we assume that both labour and fixed capital would provide only a partial answer to the problem of making a technological choice, then it becomes apparent that the various alternative technological choices, as suggested earlier, would be more abstract than real.

Even otherwise too it looks rather absurd that a technique at the same time should be both labour intensive as well as capital intensive. It also does not suggest time lag. That is, if given time, what would be the follow up sequence.

Further, to suggest that a technique could both be capital saving as well as labour saving needs to be approached with care. If this were to happen in the real world then we would surely be approaching the golden age. Unfortunately the real world is far different from the golden age world.

Whether a technique could be more or less labour

18. One feels that sort of situation has been ruling in developing economies—atleast till recently when because of the lack of alternative techniques a far larger number of labourers were employed in given techniques than desirable from the productivity (labour output) point of view.

using, or alternatively less or more capital using, is going to be extremely vague. In fact this would hardly make a rational approach to the problem of technology and would continue to remain an abstract theoretical exercise, without having any operational significance.

Neutral Technology

Some economists¹⁹ have a special fondness for the use of the term neutral with choice of technology. They are of the opinion that for a steady growth it is essential that the role played by technical progress should be such as to leave a proportional effect on all the factors of production (or inputs). The growth rate of technology therefore should be proportionate to that of capital and labour (wages), and of the latter to that of technology. In both cases the effect of technology is neutralised by the proportionate growth of other factors.

Another way of looking at this would be that while techniques are continuously improving (getting more efficient), the rate at which such technological change would be occurring would be matched by the rate at which investment and wages would be growing.

Such neutral behaviour of technology is of course not the subject of interest for developing economies. Here their main interest is in the growth of output at a rate which is larger than rise in wages or in prices. In other words, the addition to capacity, as a consequence of fresh investment made, should yield larger output per unit of investment than output had through the same investment in the previous period. The rate of increase in output per unit of additional investment made is therefore larger today than was the case yesterday. Thus the rate of change in output, as a consequence of addition to investment, is not constant.

All this amounts to saying that under our approach of

19. Those belonging to Harrodian and Hicksian Schools.

addition to particular technology, which is the same thing as addition to capacity in a particular field, the output is growing at a constantly higher rate than increase in wages or that wages are increasing at a constantly lower rate.

Particular Technique/Project Approach

Last we come back to our earlier query, if the existing approach to investment criteria (and impliedly to choice of technology) is unsatisfactory, then, what is the alternative line of approach to be adopted by developing economies? We have already hinted at the answer to this in the discussion under the choice of technology where we suggested the adoption of a technique with particular rated capacity.

On similar reasoning a particular project approach would be more helpful in economic development than adopting either marginal social net produce or growth maximisation criteria in investment allocation. In fact advocates of investment criteria are as vague about optimal investment allocation as are advocates of choice of techniques. What needs to be emphasised therefore is a particular project approach for building up a rational investment criteria which would be meaningful from the point of view of economic development. Thus a particular project approach, or the creation of appropriate capacity approach are of greater help in investment allocation than alternative approaches.

Summing Up

Since balanced development puts emphasis on the building of a continuously rising income path through balancing intersectoral economic development, it has a definite edge over the alternative theory of balanced growth. Further, it is an integral part of the theory of development, while balanced growth could hardly qualify for this status.

Like balanced growth, the current approach to the concepts of investment criteria and choice of techniques is

mainly from the point of view of growth theory than of development theory. While examining the current approaches to investment criteria none was found satisfactory and could not therefore offer a satisfactory prescription to the problem of development of growing economies.

In our search for alternatives we have found that techniques with particular rated capacity conforming to planned output and also a particular investment project approach should prove quite useful for developing economies.

V

Capital Problems : Accumulation, Allocation, Distribution and Mobilisation

Introduction

Capital plays an important part in the theory of balanced development as well as in the theory of economic development. Here an attempt is made to explore some of the basic issues raised in the current thinking on capital and on the basis of such exploration to suggest how much of these could be accommodated in the theory of economic development and how much needed to be drastically changed or even rejected in toto.

Initially we define capital itself. Then we go over to the problem of accumulation. Whether capital implies accumulating any capital it refers to or only selected capital. Subsequently we examine the capital coefficient concept for allocating capital on the basis of proposed output norms.

Further, certain issues raised in connection with the distribution of capital have been examined. From here we go over to the crucial problem of resource mobilisation both from external and internal sources. In so far as the mobilisation of external resources is concerned, we examine the strength of the argument that developing economies enjoy an unlimited access to foreign aid.

Capital Defined

In our approach to capital we exclude from it the part played by human capital for the simple reason that all human efforts have already been embodied in physical capital assets which are the main centre for our interest. We are also excluding from it natural resources (like lands, forests and minerals) which one could at best say embody the potential capital, or that which could be converted into real capital in due course of time. Since at the moment¹ these have not been converted, we exclude them from the category of capital. We are, therefore, interested only in those physical assets which have actually been converted into capital. Further, our interest in capital is only to the extent it is reproducible, that is, which yields positive output, whether in short run or in long run is immaterial.

On this very reasoning draught cattle power used for producing output, which is sold in the market would form a part of the stock of capital.

A question may be posed, when we admit that cattle power is a part of the stock of capital then would it not be unjust to exclude human labour from this stock? In other words, that part of labour which is used for producing output should analogously qualify to be included in the stock of capital. But there is a difference between human labour and non-human labour, the former produces 'positive' output (machines, consumer durables and non-durables), whereas the latter does not. Thus positive output—or output requiring the skill of human labour—is only possible to have through the application of human labour and not through any other form of labour. This amounts to saying that,

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1. Though capital accumulation is necessarily a dynamic process thereby suggesting the rate at which it can be accumulated over time, nonetheless our knowledge of actual capital existing at a particular time (in the *expost* sense) is what is operationally significant for economic development. Since nobody knows the extent of natural resources that any economy possesses and since we use the stock of capital in *expost* sense wherein a part of the existing resources have already been embodied it would be of no use to talk separately of these resources.

while cattle or for that matter electric power is an ordered form of input, helping to realise a certain output, the human power (or labour) is the main guiding force behind this ordering.²

Accumulation

With this approach to capital—which is a generic term covering all sorts of physical capital (including cattle power to the extent it is reproducible for the market economy), let us next turn to the problem of its accumulation for, ultimately, all output (income) emerges from such accumulation and faster, therefore, the rate of accumulation of physical capital faster would be economic development.

The last portion of the previous paragraph needs further articulation. Does it mean that faster is the accumulation of **any** type of physical capital, faster would be economic development?

As it is obvious from our earlier discussion, we do not mean this. Further, the whole approach to the concept of accumulation of capital in a developing economy is going to be quite different from the one used in developed economies. It would hardly help the former, if they were merely to accumulate physical capital of the nature that already exists. In fact, their backwardness is primarily due to the fact that the nature of their existing stock of capital is such that it does not encourage faster growth in income. Consequently they would have to accumulate capital of a totally different vintage.

This can be put in another way. More developed economies could use (ex ante) capital-output ratio as an important guideline for investment allocation, as their problem is merely to accumulate capital which is not very

2. In other words, the use of skills and intelligence for augmenting production or inventing new ideas is exclusively confined to human beings. For instance, maximisation of output through the employment of animal power, is exclusively the result of human endeavour, who take the vital decision as to how much of this power is to be employed to achieve a particular goal.

different from that which is currently existing,³ rather the whole concept of steady growth is built around the constancy behaviour of capital-output ratio.⁴

However, developing economies could not follow such a path. In fact, they do not have any past capital coefficients which they could use for future investment allocation. At best they would borrow the ratio from developed economies. But this could be helpful only if their production functions were identical with those of developed economies. This is not so.

What Alternative ?

But then the policy makers in developing economies are going to ask, if they did not have any ratio of their own and neither they could use capital coefficients borrowed from developed economies, then what course they should follow. Thus we have to search for the alternative approach to investment (or capital accumulation) which is independent of the current capital coefficient approach. Here again (technical) capacity approach, to which we had the occasion to refer to in the previous Chapter, comes to our help. Under this, emphasis would, by and large, be on the 'creation' of productive capacity, conforming to optimal rate of development, which itself has been predetermined.

Certain issues arise: How are we going to reconcile the creation of capacity in physical terms (equivalent to planned

3. This would not be strictly true, for if we admit this, then we also assume that technical progress is zero which would not be true. However, what is implied by this statement is that accumulation of capital would, by and large, not be significantly different from that already existing. There would only be marginal adjustment in the existing stock through technical progress while the capital stock itself would not be undergoing any structural change.

4. The constancy behaviour of capital, output ratio in a steady growth model also follows from the fact that capital stock in a developed economy would not undergo any structural change and as such any addition to this stock would yield output which would not be different from the average output to be obtained from the existing stock of capital. Here the main problem is to ensure a full utilisation of the existing stock of capital for maintaining full employment.

output) with the achievement of particular rate of development expressed in monetary terms? Further, how far the new approach is improvement over the conventional capital coefficient approach which we have already rejected?

Major Flaws in the Conventional Capital Coefficient Approach

In the conventional capital coefficient concept both capital and output are expressed in value terms, that is, so much of investment would yield so much of output (both in value terms). This means that if a technique conforming to a given investment is used it would yield **appropriate** output evaluated in money terms. The relationship between the two parametres, is, therefore, purely in money terms.

Let us see the fallacy of this sort of approach. While investment in a particular equipment is made in the previous period, the flow of output from it would take place in a future date. Thus investment and flow of output have absolutely different time dimensions. However, when a certain ratio (or capital coefficient) is suggested, then it logically follows that both investment (in technique of production) as well as the flow of output would have identical time paths. This would be true only under very restricted conditions, that is, when the technique is of such a low level of capital intensity that appropriate output is had from it without bringing in time. But this is not what is of interest either from growth or from development point of view. Here time is going to pose a difficult problem of accounting.

Besides when investment and output are related to different periods, there is the problem of prices. Obviously when a particular ratio is suggested it is assumed that prices would not change. That is, the set of prices used in determining the value of a technique would also provide a fairly good guideline for evaluating output obtained from such a technique. However, the prevalence of a constant ratio between the two parameters is a big assumption and is far

removed from what actually is found in the real world. And, it is all the more so in a developing economy, where a price stability postulate is actually going to act as a positive constraint in the path of economic development.

The price relationship between technique of production and output being so difficult to determine in a growing economy, the capital coefficient based on a static time postulate would not serve much useful purpose. There is a need for emphasising capacity and output in physical terms rather than in value terms.

Advantages of Alternative Approach

The basic line of demarcation between this approach and the alternative capital coefficient approach, therefore, is that while the former lays emphasis on the 'actual capacity' to be created which should conform to the 'actual output' to be had in physical terms, the latter does not touch the problem of physical output but with its evaluation in monetary terms.

When we adopt the actual capacity approach, as synonymous with the proposed or planned output, then this could be none else than the output so planned. However, we are more interested in the output that can be achieved than the one which is merely planned. The chances of achieving the latter are far larger when we use the capacity approach rather than the alternative capital coefficient approach.

Further, when emphasis is on physical output and capacity has been planned accordingly, the chances of the two approaching the equilibrium level would be far stronger than under the capital coefficient approach, where the value of output is relatively less dependent on the technique than on the market price. In fact, in a situation where there occurs a rapid fluctuation in the market prices the value of output, under the capital coefficient approach, might behave quite independently of the value of the capital.

1. **Working Capital:** Besides, when output is linked with physical capacity, a larger attention would be devoted to the working capital. In fact, the alternative capital coefficient approach is silent on the behaviour of working capital for its main concern is only with the value of output. True that on account of the price behaviour, a given value of a output might be achieved through a smaller input of the working capital. But the moment the prices start moving upwards a large dose of the working capital would be called for to achieve the same value of output.

This sort of assumption about the working capital would not find a respectable place in the general theory of economic development. Here the working capital would have to be specifically built into the general framework. When attention is focussed on the physical capacity and output, then especial care would be taken of the working capital for it would be difficult to achieve capacity output without a specific dose of the working capital.

I think the last point is worth emphasising upon for it is the general neglect of the working capital which could seriously jeopardise the achievement of production target and thereby upset the whole process of development.

2. **Employment:** Further, the conventional capital coefficient concept is silent on employment. In fact, it treats it as if it were neither connected with the flow of output nor playing an important role in determining the value of output. This, at the same time, does not mean that the cost of employing labourers is not accounted for while determining the value of output. This could only happen if we were to use the concept of net output. This of course is not so as under value that is used in determining the price of final output. Notwithstanding this, the cost of employing labourers is not looked at as a 'major component of cost' in evaluating output which, as can be made out from our earlier discussion, is more linked with the cost of machinery (or organic capital) than with factors like employment and income distribution.

Developed economies might use such an approach for building up an investment-output model—for in developed economies a fairly ordered behaviour of these variables is to be found. However, developing economies can ill afford to take such liberty. Here one of the most significant problems before them is that of creating maximum employment opportunities. This is duly taken care of in the alternative approach, of creating capacity which is equivalent to the output needed to attain a certain rate of economic development. Thus the planned physical output itself would be embodying human effort at a particular level of employment.

Coordinated Approach

The physical capacity concept has a further score over the alternative capital coefficient one. As physical output is the coordinate function of organic capital, raw material and human efforts, it would accord due attention to all three variables. The human efforts, in particular, would be reflected in the productivity form. In other words, through the concept of physical capacity a developing economy would be encouraged to make a better use of scarce labour skills.

Full Employment and Capital Stock Distribution

This, however, is quite different from saying that a developing economy should also build productive capacity from the point of view of attaining full employment. This can only happen if the economy has access to sufficient stock of capital or that the stock of capital is such that it could lead to equidistribution so as to yield full employment. It is the latter view rather than the former which is responsible for the misconceived notion that developing economies could attain full employment.

Such an approach would involve a considerable watering down of the most scarce resource—capital. This is what, as we have seen in the previous Chapter, is suggested

by those who are keen on providing full employment through labour intensive techniques. Here they would like each labourer to be provided with that amount of capital which is equivalent to his average share in the total stock of capital evaluated in money terms.⁵

It might be that those who advocate perfect division of capital further assume that a large part of the existing stock of capital is so allocated as to stand in the way of economic development. So there is a genuine case for reallocating this stock.

This would mean (a) that the stock is embodied in unproductive assets, or (b) that there is large concentration of stock in the hands of those persons who are so inefficient that they cannot make optimal use of this stock, or (c) that the stock is concentrated in the hands of monopolists who are deliberately keeping it idle so that they could obtain bigger profits through creating artificial scarcity.

Stock in Unproductive Assets

If the stock is embodied in unproductive assets like palatial buildings, gold and ornaments, it would be extremely difficult to distribute it to the members of the society. In other words, such stock cannot be broken into small meaningful units. Otherwise too, even if it were possible to reallocate it, it would not yield output unless the stock was first converted into manufacturing equipment. Consequently reallocation of stock would be meaningless without first trying to convert it into appropriate techniques. Such transformation would however be quite a difficult job.

Stock Controlled by Inefficient Persons

When it is suggested that the stock is in the hands of

5. The assumption here is that techniques would be tailor made to any order and that the sharing of capital stock among the members of the community would automatically conform to particular technique. This, as was seen in the last Chapter, would only be of academic interest but hardly of any practical significance, as techniques generally have fixed frontiers.

those who are quite inefficient to derive the maximum output from it, then from it is inferred that there is a case for the redistribution of stock for promoting economic development.

However, one could pose a counter question, why should a few people sit tight over the capital stock for an indefinite period when they are not able to make an optimal use of it? Certainly capital would not be accumulated merely for the sake of accumulation.⁶ If we rule this out, then the alternative possibility is that entrepreneurs are keeping the stock idle for the time being alone so that better results could be obtained later on. This is fair enough, as all inventions are made in anticipation of obtaining optimal output (with, of course, time lag).

But if entrepreneurs find that optimal output can never be had, or that it would have to be postponed for an indefinite period, then they would certainly refrain from investing in the capital stock itself.

Stock Controlled by Monopolists

If it is suggested that the stock is in the hands of a few entrepreneurs who behave like monopolists and are deliberately trying to keep it idle so that they could gain larger profits through creating artificial scarcity, then it assumes that there is already enough demand for the output produced with the help of the existing stock of capital. But this might not be the case in a developing economy where the existing market is so small that it is unable to absorb the output from the large scale manufacturing industries. The domestic market being extremely restricted, a monopolist might not have another alternative but to produce below capacity. Consequently the use of the word 'deliberately' would be a misnomer.

But if it only refers to output from a specific activity like steel—which possibly it does—then because of indi-

6. This would be true only in the Marxian world where capital is supposed to be accumulated for the sake of accumulation as entrepreneurs are capital hungry.

visibilities of such stock its distribution has altogether to be ruled out.⁷

Summary

Thus, under all three assumptions, the case for equi-distribution of the existing stock is highly rhapsodic. Not only does one meet the problem of indivisibility of certain stock, there is also the more baffling problem of distribution. One also cannot overlook the various bottlenecks that are likely to emerge right at the start of the situation. That is, besides technological and motivational constraints there might as well be scarcities of raw materials as well as the sluggish behaviour of the market for the final output.

Distribution of Stock: Need for a New Approach

The traditional approach to the distribution of stock in the static sense, has therefore to be discarded and replaced by a more dynamic approach of capacity generation—which has frequently been referred to earlier. The latter does not accept the existing resource base (or stock of capital) of the economy as a suitable starting point and neither believes in apportioning the stock on a pro-rata basis for attaining full employment. It, on the other hand, lays a positive emphasis on increasing output, through suitable capacity creation, which should correspond to a quick rise in national income over time.

When emphasis is on the creation of appropriate capacity, it as well suggests simultaneously that the capacity thus created—or capital stock added—would bring about quick structural transformation in the mode of production in the economy.

Foreign Capital

However, when we talk of the rate of addition to the

7. Our basic interest in the distribution of the stock of capital is to that extent where it is divisible among the members of the community. However, the nature of investment undertaken by the monopolist is usually such that it is not divisible into small bits.

current stock of capital, it also follows that much of it would have to be imported from foreign countries.⁶ The latter, it further follows, have the capacity to lend capital to developing economies at rates of interest acceptable to them.

However, such capacity to lend and the need for borrowing by developing economies are quite different things than suggesting that developing economies possess an unlimited capacity to absorb capital. This line of approach is basically at the back of the mind of those who advocate that growing economies have an unlimited opportunity to develop through imported capital.

Such argument generally follows this course. Since the existing capital stock has a zero development potential, it has to be discarded almost in toto and new plants and equipment have to be imported from foreign countries, implicitly the latter possess a large development potential. Further, developed economies are already endowed with a large stock of such capital—or the latest techniques—so that if they were not to export the same they would be facing a step fall in the rates of domestic income and employment which would ultimately affect their growth rate. Thus it is very much in the interest of developed economies, as well, that they export as much of capital as possible. From this it as well follows that since these economies also have a personal interest in the export of capital, they will be prepared to do so at a rate of interest acceptable to developing economies.

On the other hand, developing economies are not only badly in need of such technology rather, considering their development problem, they also possess a vast capacity to absorb such technology. This view is also based on the

8. Incidentally we must make it clear that we are using Foreign capital not in terms of transfer of gold or even of foreign exchange but in terms of transfer of equipment and intermediate goods, or even in the shape of transfer of foodgrains. However, if the equipment is to be purchased from countries other than providing financial help then the transfer would be in the shape of foreign exchange released for the purchase of such equipment from the third country.

assumption that the major bottleneck in economic development is the supply of principal inputs and not the demand for final products. This therefore suggests that demand has no independent function of its own. It is dependent on supply. If the latter were tackled, the former would automatically be taken care of.

From the above it also follows that developing economies would have no difficulty in meeting the interest liability that would arise from borrowing abroad. Initially these would be so nominal as not to impose great hardship on these economies. Over time, they would be able to earn sufficient income to discharge these liabilities. Another way of stating this is that the basic industries installed through these borrowings, would soon be operating at full capacity, as well as selling output from these plants in the international market at competitive prices. This being so the economy would have no difficulty in meeting the interest liability, as well as paying back the borrowed sum.

Emergence of Cracks

Thus the model of capital import, which follows from the above discussion, holds out a great appeal to developing countries and looks almost flawless at the first sight. However, as we go deep into the whole issue, we find that cracks appear rather early and these take away all the glamour of the model.

First of all, the assumption of an unlimited supply of capital from more developed economies is to be questioned. The mere fact that these economies have a large accumulation of capital (mainly as a consequence of their capacity to manufacture capital equipment), does not mean that they are suffering from excess supply of capital. In fact, in view of a high rate of obsolescence and depreciation these economies would themselves have to accumulate capital at a very high rate in order just to stay where they are.

Besides, developed economies are going to specialise in particular brands of equipment, which would be having

a sufficient export market within their own group (that is, among developed economies). In fact, the mutual transfer of capital goods among developed economies being so large they might not have enough margin to feed the requirements of developing economies.

In view of this, it would be appropriate to add that developed economies might not be interested in lending long term capital to developing economies, and if at all they do it, they are likely to impose certain constraints which will not be of help to developing economies. For instance, the constraint might be—and this is as well borne out from actual experience—that the capital recipient economies should also buy equipment from the lending economies (and from nowhere else). However, the prices charged for such equipment are far out of tune with the international prices,⁹ which merely adds to the extra burden on the former.

Further, the rate of interest charged might not be as low as it is usually thought to be. Being a long term loan, even a low rate of interest would make a big hole in the tight budgetary position of developing economies. Besides, as interest charges on the borrowed capital might have to be paid in a particular currency (if so insisted upon in loan agreements), then it could mean quite a substantial burden on the foreign exchange position of the economy.

Both the payment of interest charges as well as of the principal amount would depend upon the performance of the projects thus established. Unfortunately this part of the problem, as it has already been suggested elsewhere, has been approached in a casual tone. In fact, it is assumed that it is the establishment of the plants that matters, and that the rest would develop automatically.

However, this is not so. Developing economies have generally to face a number of supply bottlenecks. Raw materials might not be available both in quantity as well as

9. This is just the contrary to what is generally believed in some quarters, i.e., that foreign capital is costless.

of the quality demanded by these plants. Further, the skilling of labourers being a time-consuming process, it is likely that plants thus established might operate below capacity for quite sometime. The lack of effective demand for the products manufactured might as well induce below capacity operation, even though technical factors are as required.

Need for Cost-Benefit Studies

All this amounts to saying that, in the absence of appropriate cost benefit studies, the selection of projects would be a difficult job.¹⁰ Further, without these studies there are likely to be excessive time lags both in the completion as well as in the operation of these projects. The difficulties, coupled with inflation which itself would be aggravated because of the selection of inappropriate projects, would rapidly push up the cost of projects. This would therefore call for a fresh allocation of resources and for a larger dependence on capital from developed economies.

And even if the projects were to be executed within the scheduled time and necessary inputs were available—indeed very heroic assumptions—it would not mean that they would be operating at full capacity. It might be that the user or complementary industries—which buy the output from these plants have not been established, or even if established are slow to come up, may be—as also suggested earlier—because of the deficiency in demand from the domestic consumers.

As far as the tapping of the export market is concerned, and this is important to earn much needed foreign exchange, the economy will have to face stiff competition from the established producers. The situation is likely to be further aggravated when the newly established plants

10. Notwithstanding that formidable difficulties would have to be faced in using the cost benefit approach for analysing economic viability of a particular project, the economy could draw some approximate guidelines from other countries, especially in respect of those where such projects have already been executed.

turn out shoddy products, which would be extremely difficult to sell in the international market.

The above shows that, though there is a strong case for strengthening the resource base of developing economies through import of capital, it however has to be appropriately planned so as to match with the absorptive capacity of these economies. Therefore appropriate cost benefit studies should be conducted before these projects are established. These studies would minimise, if not completely eliminate, the waste associated in establishing projects merely on prestigious grounds.

Capacity Creation has Automatic Link with Capital Absorption

In our approach to the capacity creation to achieve the planned growth rate of output, borrowing from outside the system has to be carefully linked with the absorptive capacity, for if it were not so then by very definition the capacity created would not be equivalent to the planned output. By analogy, the import of plant and equipment and other basic goods, against foreign borrowing, would be productive only if the system has already achieved a balance in the demand and supply situation.

As the international demand conditions are far more difficult to predict than domestic ones, the former would naturally receive a small weightage in the above system. This is a significant point and needs to be further elaborated.

1. **Exports are Laggard.** Those who advocate a rapid development in growing economies through the import of capital, give a high weightage to exports. This they do for two reasons. First, through this they are able to discharge their liabilities to the foreigners, and secondly, the domestic market being small in the initial stages of economic development, production for the export market is the only alternative.

Ironically, as emphasis is by and large on exports, the

domestic market usually receives meagre attention, which further increases its dependence on foreign trade. Further, as the so-called developmental imports are likely to be exclusively financed through foreign capital, it would be natural for the economy to give top priority to export expansion, even though it might not be able to have it (as seen earlier). This would further disturb the equilibrium in the domestic market. Gradually therefore the hiatus between imports and the domestic absorptive capacity would go on further widening. On the other hand, a growing failure on the export front would make the economy still more dependent on foreign capital. Thus foreign capital, instead of becoming a catalytic agent in the process of economic development, might become a dead weight on the domestic economy.

2. **Skilling to Further the Import of Equipment:** Another notion which leads to still more disastrous consequences is that capital equipment should be imported first and subsequently the labourers should be trained in the various skills. The two follow from the excessive importance being attached to foreign capital in economic development. The basic assumption here is that once new plants are set up these would have their demonstration effect and thereby reduce the need for a technical training programme. This would amount to suggesting that labourers already possess the necessary aptitudes for picking up skills and what was therefore lacking was the atmosphere which could have helped them to pick up these.

This is assuming too much. The job of skilling is not that simple. For instance, if labourers already had the requisite aptitudes for picking up skills, then surely the problem of development would have been much easier. However, it is precisely to introduce change in the existing behavioural pattern of the people that development would have to be planned with a careful eye on foreign trade so that the latter brings about the maximum transformation in the domestic economy.

Such transformation is also needed for another reason.

It is not true that all the existing resources in the economy are non-transformable into capital assets. In fact, it is not so much the lack of domestic resources (especially saving), as it is the tapping of these and converting the same into economic development which presents the real challenge.

Taxation

Not only this, taxes also form a microscopic part of the resources needed for economic development. Further, whilst it is easier to tax the corporate sector (which, in any case, constitutes only a small part of the growing economy) and squeeze from it the maximum income, it is extremely difficult to tax the agricultural income or even raise the land revenue to a level necessary to match the accelerated rise in income from the farm sector.¹¹

Land reforms, to which almost every developing economy is committed for improving the level of welfare of its people, make things still worse. The imposition of land ceilings and transference of land titles to those who are supposed to be the actual cultivators,¹² act as the major

11. The fact that the cost of collecting scattered saving in the economy is prohibitive does not at the same time mean that nothing should be done to improve the saving investment climate in the rural sector. In fact, since the rural sector is the major sector in the economy, there is an urgent need for building up a suitable atmosphere which makes it easier to collect such saving. For instance, the spread of necessary information about saving and investment opportunities would go a long way in improving this. Further, as the rural sector would be a leading applicant for the investment programme, it should also contribute maximally to the saving pool. The people would have to be convinced that their saving would not only be appropriately invested, equally that these would yield an attractive rate of return. It would be easier to achieve this objective, when projects so financed are right in their neighbourhood. This would also have another advantage. It would reduce a high dependence on the urban saving which, at present, happens to be the major source for financing a large part of the rural programme, and thereby helps to accelerate the pace of industrialisation.

12. Experience shows that usually redistribution of land is hardly on egalitarian lines. Most of the erstwhile landowners again appear on the scene in one shape or the other. While previously it was easier to make them pay higher taxes, it is not possible to do so under the changed circumstances.

constraints in raising land revenue or in the imposition of agricultural income tax. Paradoxically while the new land-owners have the capacity to pay higher taxes, they are clever enough to dodge the same under one pretext or the other.

Besides, the Administration is equally helpless in the matter, as these people exercise the major controlling voice in the political fortunes of these countries. This therefore amounts to suggesting that unless the administration is bold enough to incur the displeasure of these vested interests and is not bothered about the consequences, it would not be possible for it to mop up a large part of the rural saving through taxation.

Indirect Taxes

Excise, customs and sales taxes are usually the popular form of imposts in developing economies, which particularly compensate for the low recovery of resources from the agricultural sector. However, an expansionary trend in these indirect imposts is more illusive than real, for the rate of their expansion is no match for the rate of expansion of the money supply. In fact, these levies themselves play an important role in money supply for these push up prices, wages and cost of production.¹³

The situation could be improved, if resources thus raised were put to productive use by the Administration. Unfortunately, this is not so. Generally these resources are devoted to finance unproductive expenditure, which add further fuel to the smouldering inflation.

On the whole, these imposts as well as direct taxes do not generally make a significant contribution for financing economic development in growing economies.

13. This would generally be true of customs and excise duties rather than of sales tax. Both customs and excise duties have a direct bearing on the cost of production as traders-cum-manufacturers who have to pay these taxes would invariably pass these on to the consumers.

Deficit Finance

When there is not a healthy impact of the various imports on economic development, one can well imagine what would be the impact of deficit finance. In spite of this, it is thought to work like magic in economies which lack real resources as well as the capacity to raise these. In other words, like the classical belief that unlimited supply of labour is a source of capital formation, it is thought the same would hold true of deficit finance.

We have already noticed the hollowness of an unlimited supply of labour for capital formation in an earlier Chapter. Analogically we reject the plea that an unlimited expansion of the money supply (via deficit finance) would promote capital formation. Such expansion of the paper resources, without their being adequately matched by the flow of real output, would only pressurise prices and hike up the cost of production in the same way as would the employment of excess labourers in the absence of adequate supply of wage goods. Both, therefore, appear to be equally harmful in so far as the problem of capital formation is concerned.¹⁴

Middle and Way Out

We have dealt at length with the problem of raising domestic resources and utilising these for economic development, merely to bring home the gross confusion that

14. This may sound rather odd—that is, the comparison of the impact of the artificial expansion of the monetary resources on output with that of employment of surplus manpower for capital formation. In fact, some argue that both are complementary. That is, the employment of additional manpower in a labour surplus economy is aided through the creation of artificial money resources, for this is the only plausible way of making payment to the workers thus employed. They do anticipate the inflation generating impact of such an approach but they would argue at the same time that the occurrence of inflation would only be a temporary phenomenon and soon the situation would be normalised (see Arthur Lewis, *Theory of Economic Growth*). This, however, would amount to assuming too much. The fact of the matter is that on account of the gross rigidities of the market structure in a developing economy, the flexibility plea of the inflation generating finance is to be questioned.

exists in the current discussion on this important issue. None of those who advocate either labour intensity (widening the distribution base of capital), or capital intensity (deepening the capital distribution base) have been able to approach the problem in proper perspective. It is strange that the distribution of resources should be talked of—as done by those who advocate capital widening—without first approaching the issue from the point of view of tapping these. In their view, it is the distribution which is more important than tapping. Those who advocate capital deepening also seem to have equally neglected this issue, inasmuch as they assume that once such deepening occurs the domestic resources will automatically be tapped.

Our view is that if productive capacity is created to generate a particular rate of development, then this problem would as well be tackled. As we are far more concerned with the rate of change in the domestic income which, as we have suggested earlier, is a function of the rate of change in the physical capacity (or which is the same thing as capital formation)—the tapping of the domestic resources (more in the accrual or marginal sense than average), is going to play a significant role. In fact, under this approach, the resources would be distinctly identifiable and their role would be properly highlighted in economic development. Consequently a more rational approach is called for to tackle the entire bundle of taxes as well as deficit finance.

Capacity Flow of Output and Planned Development

We have not yet been able to address ourselves to the problem of reconciling capacity generation and *pari passu* flow of output (both in physical terms) on the one hand, with the achievement of the planned rate of development (in money terms) on the other. There would have been no problem if we were dealing with homogeneous goods. However, we are dealing with a heterogeneous bundle of goods which are evaluated in different physical units. Thus, we

cannot escape the problem of **prices**. Further, when we link this issue with that of achieving a particular rate of development, then it necessarily follows that under a given price stability postulate the achieved rate of development would be the same as the planned one.

But then a question arises, how far is this price stability postulation built into our approach of the creation of physical capacity to the desired level of output? When capacity is equated to the desired level of output then such a price stability condition is automatically built into the model. In other words, when the creation of capacity is exactly equivalent to the expected level of output, prices could not be but stable. However, under such stability conditions, the price behaviour cannot at the same time be equated with the rigid price structure, that is, the same set of prices continue to rule tomorrow or day after as ruling today. Such behaviour of prices would rather prove a hindrance than a help in the development theory.

A moderate rise in prices, on the other hand, is a necessary part of the stability condition. And such a moderate rise in prices is subsumed in the rate of increase in physical capacity. That is, the relative price differences between capital equipment and flow of output from it would remain constant. If prices of capital equipment are marked up by, say, five per cent the same rise in the price of final output would emerge, under the equiproportional change in the relative prices of capital and of output.

This would also imply that although the value of capital stock is in terms of yesterday's prices and that of the output in today's prices, the relative price differential between the two would be constant. The relationship of current output to capital, in other words, would be exactly the same as the relationship would have been between yesterday's output and day before's capital stock. When such relative price stability is maintained then there would be difficult in equating changes in output over time, ex-

pressed in value terms, with the postulated growth in national income.

Summing Up

Capital refers to those productive assets which reproduce themselves or yield positive income. Though it includes livestock power in so far as its output is for the market economy it completely excludes human effort.

Accumulation of capital carries with it a special meaning for developing economies and refers to the accumulation of absolutely new types of capital assets quite different from those already in existence.

The capital coefficient concept is more relevant for developed economies than for developing ones. Here there is a need for highlighting inputs other than fixed capital. While capital in the current capital coefficient approach treats working capital as a dependent variable of fixed capital and as such has no independent role of its own, that could hardly be a valid argument for allocating capital in a developing economy. Besides especial care is needed to articulate the problem of employment. The current discussion on the capital coefficient is again silent on this issue. Both these variables, working capital and employment, have however been accorded appropriate weights in the physical capacity and output approach.

Capital is not apportionable on a pro rata basis. The only way to increase income from this is to increase its efficient use—the latter would of course depend upon the adoption of appropriate economic policy instruments.

While foreign capital is essential to push up the rate of domestic development, it by itself would not be able to achieve much. In other words, the flow of foreign capital would have to be linked with the domestic absorptive capacity. Otherwise it could become a burden.

An accelerated rate of development cannot be had without first making sufficient effort to mobilise

domestic saving. Here, instead of relying mainly on the fiscal measures directed to squeeze out maximum income from the corporate sector as well as from the commodities, the Administration would do well to create an appropriate investment climate as well as improve its information service. These would help mobilisation of saving for productive purposes and also encourage people to be more thrifty in the future.

The farm sector should be appropriately taxed as without this the economy would be losing an important source of revenue. However, this would call for considerable boldness from the Administration, as well as the creation of efficient revenue staff.

VI

Population, Employment and Theory of Economic Development

Introduction

Notwithstanding the fact that physical capital, embodied mostly in inanimate instruments of production like plant and equipment, plays an important role in determining the rate of economic development (as seen in the previous Chapter), it could not be, by any stretch of imagination, the sole determining factor for such growth rate. In fact, by its very nature—being inanimate—it would not be able to create wealth for the community, unless it was properly supervised and maintained.

This, therefore, suggests that unless the economy has a suitable population size—or the size is in proportion to its natural endowment and skill, and a labour force which is capable of meeting the challenge of development—the mere accumulation of capital would not bring about economic development.

In this Chapter we address ourselves to some of the problems that are raised in the development theory by the growth in population. First of all, an attempt is made to understand the significance of the population problem

itself in growing economies. Then we examine whether the problem is different from that found in developed economies. And if so, how far? Next we try to analyse the substance behind the argument that underdeveloped economies with sparse population have a larger development potential than those with dense population.

Subsequently, we also bring in the problem of population growth. For instance, would it be true to say that the rate of increase in population in a developing economy (irrespective of the initial population size) would be a function of the expansion of medical facilities or of other non-economic factors? Or would it be a function of the level of economic development itself?

We then, examine the validity of the ceiling (or terminal) population concept as also of the optimum population concept; and subsequently try to find an answer to this question: which of the two concepts would be more helpful for developing economies?

Last we extend our analysis to the employment problem.

Population Problem

A brief resume of the population problem in growing economies would make for a better understanding of the problem itself. Briefly, developing economies are faced with a quick rise in population which is far out of proportion to their current level of development (or, which is the same thing, the growth rate of their national income). The rates of population growth in these economies vary between 2 to 3.5 per cent per annum. It is feared that at this rate the world soon have to face an explosive population situation, which would lead to a serious ecological imbalance and the latter would bring about natural calamities and miseries all over the world.

How far this would actually happen is anybody's guess. However, considering the situation that exists today, one cannot expect this to happen for quite a number of years to come. In fact, the world today is far happier a place to

live in than it was in the past, where, in spite of low population pressure, natural calamities occurred with a fairly high frequency.

Thus, while population might grow at a rapid rate, it need not bring about misery, provided economic development is also occurring simultaneously. And this is the major explanation for the above seemingly paradoxical situation; that is, while recently the world population has been rapidly growing, human misery instead of growing, is rapidly on the decline.

This, at the same time, does not mean that the world will keep on becoming a better place to live in and that it can accommodate an unlimited rise in population. In fact, unless the rate of population growth comes down, it would not be possible to accelerate the rate of economic development. Also it is to check such unabated growth in population that rapid economic development is called for.

Sparsely Populated and Densely Populated Developing Economies

To suggest that sparsely populated growing economies have a better opportunity for economic development than densely populated ones (as suggested in some quarters), is to admit that the former have a comfortable man-resource ratio while the latter do not have it. This need not be the case. Further, even if there were comfortable man-resource ratio, as in sparsely populated areas, this need not accelerate the pace of their economic development. Here much would depend upon the nature of resources available and the use to which these could be put to within the existing technological norms. Thus the mere existence of resources cannot be equated with economic development.

Resource-Man Ratio

Let us first of all take up the issue of resource-man ratio. The very fact that economies are underpopulated and, at the same time, poor would itself be a good indicator of the fact

that these do not enjoy appropriate man-resource ratio. If, on the other hand, these were to be richly endowed with easily accessible resources then these economies could not have remained sparsely populated for the very existence of such resources itself would have encouraged a large scale immigration of workers from densely populated economies.

True, there are political barriers on such migration at present; but these generally did not exist, before the first World War, when there had actually occurred a large scale migration of the people. Further, the pattern of migration was such that while the immigrants from the poor countries were admitted in to economies which were generally endowed with poor resources (like those falling in Africa and other tropical and sub-tropical areas), the immigrants from the Western European countries were encouraged to settle down in the temperate economies of North America, Australia and New Zealand which were also richly endowed with natural resources.

Dualism at International Level

Such a pattern of migration had introduced another dimension of dualism. While those economies where labourers from the Western European countries had been encouraged to settle down became fairly developed within a short period of time, economies where labourers from the poor countries had immigrated continued to remain poor. In other words, rapid development of economies like the USA, Canada, Australia and New Zealand has to be ascribed to the immigration of skilled labourers from the Western Europe as well as to the abundance of natural resources (agricultural lands, minerals, etc.). On the other hand, the lack of development in Africa and other parts in the tropical world is due to the immigration of unskilled labourers as well as the lack of comfortable resource-man ratio. That is, while most of the African lands could not be utilised for farming, these lands equally did not possess commercially exploitable mineral wealth.

Further, while Canada, Australia and the USA continue to be under-populated in relationship to their resources, most of the countries in Africa are no longer in this position. Again, development in the latter could only occur after a heavy capital investment had been made. This these economies could not afford. Thus, even if these economies were to allow the immigrants from the rest of the world (especially from the thickly populated countries in Asia) to settle down on their land, this would not promote their economic development.

The Limitations of Depending on a Particular Resource

Earlier we had suggested that it was the nature of the resources available which determined the pattern of economic development. It might even happen that though a particular economy is rich in let us say mineral oil, it has no other resource worth the name. Where does it stand? Surely the mere possession of this single resource (oil) would not be sufficient for economic development. Here the sparse population and the possession of particular resource, however important the latter might be, would not promote economic development.

It might, however, be argued out that if a particular resource commands a high international demand (as does oil) then the country concerned could earn rich revenue through the sale of processed and or semi-processed products produced from this resource and utilize the income thus earned for domestic development.

Unfortunately things are not as simple as that. The exploration, prospecting and transportation of oil itself would demand a high degree of technical expertise as well as capacity to import costly equipment. The poor economy would not have either of these facilities. Therefore if the oil industry is to come up, it would fall into the hands of foreigners who would create their monopoly interest in it.

If, on the other hand, the local Government is not generous enough towards foreign interests then very pro-

bably a specific mineral might remain unexploited. The local economy, therefore, has no alternative other than fall into the traps of foreign firms.

Further, the implication of this type of development is that it would create a technological dualism—that is, while a highly sophisticated technology would be used in the oil sector, the rest of the economy would continue to use the outmoded technology.

The situation would be made worse when the revenue thus earned, in the shape of royalty received on oil export, might be diverted into conspicuous consumption by the local elite. Indulgence in such consumption would as well be encouraged when the local market holds out very little prospect for productive investment, especially in the industrial sector. In other words, in view of extreme poverty of the domestic market, no useful purpose would be served by establishing modern manufacturing industries. While immigrants from the neighbouring dense economies might have created a viable market for the setting up of these industries, the politicians would certainly not tolerate such immigration.

Current Approach to Population

The fallacy of linking dense population with economic development (through utilising labour force for capital formation) has already been studied earlier (Chapter III). Here we would analyse the following arguments, met in the current discussion on the population problem in developing economies.

- (a) The growth rate of population is independent of economic development, the consequence of improved health facilities, which in turn have brought about a precipitous fall in the death rate.
- (b) In all cases, population would first be rising to the natural ceiling; then it would start declining

and ultimately it would stabilise itself at the equilibrium level.¹

- (c) The time taken to complete this process would vary from country to country, depending upon the domestic conditions.
- (d) Such a time lag, however, could be cut to the minimum, provided the country was enjoying an accelerated growth rate. That is, at a high growth rate forces would automatically be set into motion which would bring population to its equilibrium size.
- (e) Family planning is an effective instrument for reducing population to its desirable growth rate and can operate quite independent of economic development itself.

Inherent Contradictions

Even a cursory glance at the above would bring out the inherent contradictions in (a) and (d). When in (a) population behaviour is said to be independent of economic development, in (d) it is suggested that an economic development has in it the built-in mechanism of population control.

When it is suggested that population growth is mainly the outcome of the spread of elementary health facilities like control over epidemics, malaria, etc., then it follows that population growth could occur quite independently of economic development.

This might be true, though strictly in the **short period**, when even elementary health facilities would reduce the death rate at an encouraging speed and thus accelerate the

1. We have introduced here two new terms, that is, population conforming to (a) ceiling level and (b) equilibrium level. By the former we mean that population size which is the highest from the angle of natural growth but not from the point of income maximisation (or economic development), while by the latter we mean population which conforms to the income maximisation path.

population growth rate. However, over time,² the population growth rate would definitely start declining as a consequence of the growing awareness among the people that it is the small family that they could afford to support at the level of living that they have become used to and the latter is surely the function of economic development.

Thus the population path would have to be broken into two time paths. The first one would centre around the behaviour of population as a consequence of the operation of non-economic factors like health facilities rather than economic development. But this, as it has already been observed above, would be only for a short spell. The moment the health effect has cooled down and is superseded by the development effect (via rise in income) we would be entering into the second and prolonged phase of time which would make population as a dependent variable of economic development.

Ceiling and Decline

Having modified this, the next question arises, how far would it be correct to say—as suggested in (b) that population would, in the first instance, climb to its natural ceiling, before it starts declining? One has further to ask, why should it be essential that it should reach the ceiling first before touching the floor? Is it merely a natural phenomenon? Or is it based on some reasoning?

1. **Whether Natural Law:** If it is the natural law, it would mean that population in every country would in the first instance touch the maximum growth point before it starts declining and ultimately gets stabilised at a level which is always below the ceiling. It is therefore being suggested that, irrespective of the level of economic development attained, population in every country must necessarily reach the maximum growth point in the first instance before it starts declining.

2. Economic Development, as it has already been suggested in Chapter II, is a function of time.

One, however, fails to find logic behind this argument. When there is zero or even some growth occurring then simultaneously a high growth rate in population cannot occur merely because there is a natural population ceiling. In other words, while talking of population growth we cannot at the same time use the static tool of existing growth rate. Instead our focus should be on a rapidly growth rate.

Consequently, in the determination of the ceiling level in population, economic factors would be playing a far more prominent role than non-economic ones. The same conclusion as well follows from our earlier statement that exogenous factors (like health facilities) play only a limited role in determining the growth rate of population.

2. Based on Logic : However, when we argue out that any rapid rise in population is essentially a function of economic development and further that there is something like ceiling population, then by implication we admit that such a population would actually exist in the real world.

This, therefore, is not merely a logical deduction, but is as well borne out from the experience of more developed economies. The demographers have been able to identify periods of fast population growth to be those which coincide with rapid economic development and once the population touches the ceiling (or saturation point), during the course of economic development, it will thereafter start declining and ultimately adjust itself to a growth rate conforming to a steadily rising standard of living. This historical experience, therefore, does lend support to the argument that there is something like the maximum population growth point in the economy which it must reach before it comes down to the final equilibrium population path.

Health Facilities Further Considered

Analysing further the role of health facilities in determin-

ing the population path, one finds that it is the spread of communication facilities (an economic factor), for instance, than anything else, which would quicken the spread of these facilities. In other words, areas well served by communication facilities would show a large spread effect of health facilities relative to those inadequately served.

Some would still claim that the lack of communication facilities have been no bar to the spread of health facilities. They support this by citing the example of those economies which have been able to eradicate malaria and other communicable diseases, almost overnight, with the help of elementary health measures (like a wide scale sprinkling of the DDT).

This, one feels, is a tall claim, based on the superficial observation about the spread of health facilities. The fact of the matter is that it took quite some time before malaria was brought under control and it was further observed from experience that more economically prosperous the rural areas happened to be the quicker was the control of malaria. Contrary was the experience of areas lacking basic facilities.

Moreover, the mere control of malaria itself would hardly have any significance. It might or might not increase the life span. For instance, if the people have already a weak constitution—as well as a low resistance power, the spread of health facilities would not make substantial difference to their life span. Thus poverty would still take a heavy toll of human lives, notwithstanding the fact that the Administration has been able to control the communicable diseases.

All these arguments do support our earlier contention that the mere control of certain diseases and epidemics would not automatically increase the life span of the population. The latter is far more a function of economic development than anything else.

Family Planning

The basic confusion of linking the average life span of

the population with the spread of health facilities has also led to a further confusion of viewing population control as mainly a function of population planning. It is argued out that if health facilities could increase the average life span, the propagation of family planning techniques would automatically create an environment where people, irrespective of the level of their economic status, would be induced to practice these techniques. In other words, since the survival of one member under these health facilities would be equivalent to having two (even three) members, prior to the availability of these facilities, the parents would refrain from raising large families. Thus, so runs the argument, propagation of the family planning techniques would automatically check the size of families.

Obviously if the mere spread of the family planning message in the rural areas could do the trick and help to stabilise the population to a level needed for economic development—then it would be an ideal solution for controlling the explosive population situation, which is at present found in most of the developing economies.³ But, unfortunately, it is not so. The propagation of the family planning techniques would alone not be of much avail unless the people have a receptive mind and surely such receptivity would be faster if faster is the growth rate.

Summary

In short, it can be said that the rate of population growth is dependent on the rate of economic development. The fact that population is growing rapidly in developing

3. Some might like to argue out the other way, that is, if the mere spread of health facilities would not make a significant difference to the survival rate of population then surely any talk of the explosive growth in population would be meaningless and, under the circumstances, there would be no need for family planning. But the fact remains that there has lately been a population explosion, specially in rural areas. However, such explosive population growth only occurred after these economies had started to develop at a fairly fast rate. Thus both economic development as well as the spread of health facilities have joined hands together in pushing up the life span and the growth rate of population.

economies, cannot be ascribed exclusively or even mainly to the spread of health facilities. Both the spread of these facilities as well as their efficiency are intimately linked with economic development. Equally, the speed at which the family planning message spreads among the masses would also depend upon the level of economic development reached.

The experience of developing economies also supports the view that while the investment on family planning programme has substantially raised the Government's expenditure, it is not at all matched by the benefits derived by the community.⁴

Our analysis has also suggested that there is a substantial evidence to support the concept of ceiling population as well as for the fact that population growth rate would stabilise itself at a level equivalent to a particular level of living.

Optimum Population

We would like to pose further these two queries. How far is the concept of optimum population different from the ceiling population, discussed in the previous section? Further, is the concept of optimum population valid for growing economies?

Definitional Problem

The ceiling population, as seen earlier, refers to a situation where the maximum natural growth of population can be reached in the course of economic development, while optimum population refers to the maximum population that can be supported at a reasonable level of living. Consequently the main dividing line between optimum and ceiling population is the capacity to support population at

4. One of the major factors for not conducting cost benefit study in the family planning programme is that the Administrators in most of the developing economies are not quite happy with the performance of this programme.

a particular level of living. It may be asked, at what level? This is going to be difficult to answer. Perhaps in a very general way it could be said that the level of living under the optimum population would be one which allows for the enjoyment of the basic necessities of life, plus also allows the basic comforts. This itself would raise further issues. But then, as it has been stated earlier, it would be difficult to define the level of living itself. Thus, under the optimum population, a population size, smaller than what is at the moment, could have been supported at a reasonable level of living. The optimum population would, therefore, be smaller than warranted by the current level of living.

This would also imply that as the economy starts developing, its capacity to support a larger population would also grow. If this were true then the concept of ceiling itself would lose much of its glamour, as it is implied in the latter that once the economy reaches the highest growth rate in population, the latter would start declining.

Under the alternative optimum population however a high population universe, other than the so-called ceiling population, could have been supported. This, in other words, means that a higher growth rate in population is far more to be associated with the concept of optimum population than with ceiling population.

Putting it still differently, under the population ceiling there is only one ceiling—a sort of natural ceiling—beyond which the population would not grow; under the optimum population, on the other hand, one could come across a number of ceilings—each one conforming to a particular income path. As the capacity of the economy to support a high population growth rate rises, the population ceiling itself would rise to a new size of population. That is, a higher growth of population would be asymmetrical with the new optimum size of population.

It might, as well, be put in this way. If the national income rises at a fast rate and the population does not grow

in sympathy—as it could happen in a closed economy model—it would lead to a heavy unemployment as well as to a cumulative decline in income. A larger size of population might, therefore, be desirable in order to maintain a high level of income.

Conflict

From the above discussion it also follows that we have not one but two approaches to the ceiling population, one approach is that of demographers, and the other one is that of economists, and both are contradictory. While the former (demographers) approach suggests that the ceiling level of population is reached but once and after that it has a downward trend and ultimately stabilises itself at a particular growth level, the latter (growth economists) offers a different version and suggests that a high growth rate of population, even above the ceiling level, can be supported, if the economy also enjoys a high growth rate in income.

Much of this confusion is due to the fact that the ceiling population, under the demographers' version, is due to rapid economic development which pushes up the population growth rate to that level; but this is not synonymous with the optimum population, for, here, different population sizes could be supported at different levels of economic development.

Who is right—demographers or economists? Would be difficult to say.

Optimum Population and Developing Economies

How far is the concept of optimum population valid for a growing economy? It might be straightway answered that it has a great validity in such an economy for the following reasons. As we have already seen, the concept of ceiling population is rather vague and, therefore, unsatisfactory from the point of view of the development theory. We have, thus, to seek for an alternative approach to the population policy; here the optimum population comes to our rescue.

The concept of optimum population is far more definite than the ceiling population for it aims at a certain level of living to be reached. And once we accept such a level of living, as the goal of development, then efforts would be made to attain such a level. It is, therefore, effort promoting. In other words, while accepting the optimum population as the final goal, the development process becomes a dependent variable and no longer independent of it as is the case with the conventional population approach.

By putting special emphasis on population and making economic development dependent on it, we would be according a very favourable place to the population problem. In fact, it would come to occupy a central position in the theory of development and planning.⁵

This approach would also have another advantage. As it would be synonymous with creating capacity that should be able to support the optimum population, it would as well encourage an optimum use of such capacity. And further, aiming at such a population universe (optimum), would also encourage a greater care to be taken of the much neglected problem of employment, for optimum population would not be there without optimum employment. (More on this in section on Employment).

Summary

In short, optimum population is a far more satisfactory goal of economic development than the alternative ceiling population. We have also noticed earlier that the attainment of optimum population is conditioned by the adoption of the optimum employment policy where the resources of the economy are employed in such a way that these yield optimum output. Consequently, both capital and labour,

5. As economic development is the ultimate goal of developing economies, which is also suggestive from the use of term developing, and also the fact that it would not occur automatically, for example, through the operation of free market forces,—then it necessarily follows that it would have to be attained through planning. Whether there should be total or partial planning is the subject matter of a separate study (in Chapter VII).

the two key variables in the theory of economic development, would have to be so carefully employed that these yield optimal benefit to the economy.

Employment

While a deep anxiety is often expressed over the alarming unemployment (and underemployment) situation found in growing economies, the problem itself is often accorded a vague treatment in the planning models—which generally treat it as a residual factor and not a major one. It is mainly capital that receives the major attention in these models.

Classical Model of Wages

However, when emphasis is put on employment then some might even argue out, are we not facing a situation which is akin to the classical model?, where a rapid growth of population (and labour force) acts as a positive break in the path of economic development. One would say no.

In the classical model, because of the growing wage bill over time, the profitability of investment continuously declines and ultimately ends up in a state of despair or in the classical stationary state.

But this is not so in the model we are developing. Here, unlike the classical model, the manufacturing sector does not operate under constant returns to scale, but under increasing returns to scale. In other words, the occurrence of technical progress, at a speed much faster than the growth of the labour force or wages, would postpone permanently the emergence of the classical type of stationary state. The growth of the wage sector would have therefore caused difficulty only if output was not growing *pari passu*. But once emphasis is laid on optimal growth in employment, then this has already been taken care of, for optimal employment like optimal population can only be achieved through optimal flow of output or flow at full capacity level of the capital stock).

The Problem of Choice

The main problem, in consequence, is the choice be-

tween optimal employment and optimal output. As we have already stressed earlier, optimal employment is far more meaningful than optimal output. Optimal output might be achieved, but this might or might not correspond to optimal employment. However, under optimal employment the output would have to adjust to it for such employment would depend upon income at full capacity—which is equivalent to optimal output.

The classical economists were not concerned with optimal employment for the simple reason that they could not think of optimal output to sustain it. Their model was built around a declining rate of output—especially in the farm sector—vis-a-vis the growth of population. This is not so in the above model. Here there is a constantly rising trend in output along with the rise in the labour force.

Summary

Briefly, in the above study we have tried to focus attention on the crucial problem of employment in a developing economy. As it was emphasised earlier, employment should receive a larger weightage in the planning model than accumulation of capital. The latter provides extremely restrictive employment opportunities. Besides, it would be unwise to lock up investment in such techniques which do not yield optimal output and employment. Rather, the economy would be better off if it were to spread out such investment over techniques which fit into the peculiar factor proportion situation found in a developing economy.

Summing Up

Although the world is surrounded by explosive population growth rate in the middle of the present century, it is still a far happier place to live in than was the case a few generations ago. However, Earth cannot afford to support a continuous rise in population for a long period for that would adversely effect man-resource ratio. We had suggested that rapid economic development would itself bring about the necessary adjustment in such a man-resource

ratio. In consequence the fear that population would outgrow resources so much so that there would hardly be enough space for everyone, will not have to be faced.

While dense economies face a serious man-land problem, there is not enough scope for their being absorbed by sparsely populated economies. First of all, the latter do not in fact have a comfortable man-land ratio, which is contrary to the general belief that sparsely populated areas have a comfortable ratio. Further, international migration of labour is no longer an accepted feature as it was prior to 1939.

Notwithstanding that health facilities have increased, the age of survival of the people in developing economies, these, however, have not made a material difference in their birth rate. Such a birth-death pattern has disturbed the economic balance in these economies. But this state of affairs appears at best to be a temporary phenomenon, for, as economic development speeds up, it would automatically bring about a rapid decline in the population growth rate. Thus, over time, health facilities, as well the whole programme of family planning, should not be viewed as independent of economic development but as an integral part of it.

Though there is some truth in the argument, put forward by the demographers, that each economy would be in the course of development touching a ceiling level of population and after this population would start declining, for building up an appropriate programme of economic development itself the optimum population would play a far more crucial role than the ceiling population. In other words, while the former is a natural phenomenon the latter is an economic phenomenon and therefore would exert a higher weightage in encouraging an appropriate employment, income and output policy.

Developing economies would have to pay a greater attention to employment than to capital accumulation. That is, capital would have to be accumulated to serve the primary need of employment.

VII

Planning, Price Mechanism and Allied Issues

Introduction

Our conclusion in the last Chapter was that capital accumulation should form an integral part of the theory of optimal population and employment and not be independent of it. Therefore, while framing the targets of production in different sectors of the economy, the goal of optimal employment should be there before the planning authorities. However, the fact that such goal is in no way different from that of optimal income, would become clear as we proceed with our analysis.

In the first part of this Chapter a question is posed, are the entrepreneurs entirely at the mercy of the market forces so that they have no independent judgment of their own? Then we examine the issue of the price mechanism in a developing economy and see how far the Government should interfere with this mechanism.

Planning

We would not be saying a new thing when we make a statement like this. Almost all developing economies have realised that they cannot break the vicious circle of poverty

unless they make a **conscious** effort in this direction. One of the major factors behind the age-old stagnation in these economies is the lopsided structure of their domestic market, which is a great hindrance to economic development. Further, since the existing market has failed to optimise resource allocation, it is generally concluded that it is only through the direct intervention by the State that the situation could be improved.

We do not deny that the State should interfere with the market, that is obvious enough considering the imperfect state of the market in a developing economy. The basic question however is, what is the limit to the State interference? Should it be hundred per cent? That is, the State completely demolishes the free market apparatus. Or should it be partial? That is, interference is done to the extent it is necessary to improve the existing market structure and thereafter the market is left to operate by itself.¹

Before we work out the solution to this problem, we should like to pose a few interrelated issue. For instance, would it be true to say that in a free market there is no planning and that everything is left to the interaction of the market forces of demand and supply. Putting it slightly differently, if the free market has encouraged an optimal resource allocation in developed economies, then why has it failed to allocate resources in the same manner in developing economies? Is it that the market actually has never been free in the true sense? If so, then what have been the major hindrances in the operation of the free market? Further, would the removal of these hindrances pave the way for the operation of perfect market conditions?

Planning and Market Mechanism

To suggest that "free market" and planning are poles

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1. Socialists advocate a complete interference by the State in the market mechanism. They feel confident that this approach would provide an ideal solution to the problem of development. There are others, who though suggesting that the state should adopt positive measures to modify the prevailing allocative machinery, would not at the same time like frequent interference by it in the market mechanism.

apart would not be correct. True, in a free market economy the forces of demand and supply would be operating and the prices would be determined by their mutual interaction.

However, at the same time, it would be appropriate to add that, behind such price determination there also lies the 'planned' behaviour of thousands and even millions of individual entrepreneurs. Notwithstanding the fact that the output of an individual firm constitutes a small fraction of the aggregate output, it nonetheless exerts an influence in determining the aggregate output as well as the market prices. In other words, while determining fresh capacity to be created (or planning output for the future) a firm has to weigh carefully a number of vital factors like sales in the past, the possibility of the emergence of alternative goods in future and a likely shift in the consumer's demand pattern. Thus they would have to forecast, with a fair degree of accuracy, the whole course of the consumers' behaviour in the future. All this amounts to saying that the process of planning is there right at the micro level (or individual entrepreneurs' level).

It might be that the expectations of an individual producer are not fulfilled—that is, the realised output either exceeds or even falls short of the expected output, or that there are price fluctuations far beyond original expectations of these producers. But all this could have equally happened if planning was done at the macro level (or the State level).

1. **State Versus Private Firm:** However, it might be argued out that the State has a much better command over the facts and figures as well as over the resources of the economy than private entrepreneurs. Would it not therefore be a better planner than the private sector?

This is not true. Though a firm in the private sector might lack access to some very vital statistics needed for production, nevertheless its past experience as well as ability to forecast the future trend would certainly encourage formulating rational targets of production. Further, the State

might have access to resources as well as to statistics, but it does lack that zeal and business acumen which play an important role in the whole producing apparatus. Here the private sector has a definite edge over the latter and might therefore turn out to be a better planner.

Equally, in conventional economic theory, it is not the actual capacity created which is so important in determining the prices of goods and of factors of production as is the interaction of forces of demand and supply. The free market therefore plays a decisive role in the creation as well as in the demolition of capacity in different sectors of the economy.

Notwithstanding that the market might reflect the aggregative behavioral pattern of all (individual) decision makers, nonetheless the decision making of the latter need not entirely depend upon the market conditions. The decision makers are also governed by their own judgements about the future trends in the market, expected sales and the economic benefits derived through creating new capacity.

2. Past Economic Development: This is also the conclusion that one draws from the study of past economic developments. In these developments the innovators have played a decisive role. This has been skilfully dealt with by Schumpeter in his theory of development of capitalism.

This amounts to suggesting that entrepreneurs have generally an inventive mind and try to maximise their gains through the introduction of new goods and new techniques of production. It is therefore not necessary that they should be entirely or even mainly guided by the market forces. They are likely to follow a strategy which is **partially**² independent of the conventional market forces.

2. We have emphasised the word partially in order to highlight the fact that any deviation from the conventional market forces is only a temporary phenomenon to the extent it is necessary to maximise the gain following from the introduction of innovation. In other words, there is temporary distortion in the market equilibrium and the moment the economy gets readjusted—or the impact of innovation has been fully absorbed—it would get stabilised at a new but a higher equilibrium point.

The issue could be approached from another angle. Even on a purely logical plane, it does not sound correct to say that in a free market each entrepreneur is at the mercy of the conventional market forces over which he has no control whatsoever. That is, he has to swim or sink according to the mood of the market. This type of situation would only have an academic interest. Operationally it would not be true.

When an individual undertakes the manufacturing risk, it would not be worth undertaking unless he is sure of a reasonable return on investment. When he creates (manufacturing) capacity, he is optimistic that this would yield him an optimum return on investment. Otherwise he would not go in for it. This means that he is consciously planning an output, which would maximise his private gain.³ And those who do not plan their output with due care are bound to face failure. In fact, the rate of bankruptcy is the highest among them.

Entrepreneurs in Developing Economies and Price Mechanism

If all what we have said above is correct, then one has to pose the next question, what has gone wrong with the entrepreneurs in developing economies?

Entrepreneurs in developing economies are in no way different from their counterparts in developed economies. Thus it is not the behavioral pattern but the circumstances under which they have to work which makes all the differences. Consequently if entrepreneurs in developing economies were given an opportunity to work in developed economies, they would behave exactly the same way as their counterparts in developed economies.

Thus, if the general tendency of entrepreneurs in developing economies is to take an active interest in trading

3. Planned output, as we have already argued out elsewhere, would be equivalent to actual output. This is because this output would be reflected in the market forces, or, which is the same thing, the mood of the market would be reflected in this output.

(especially in accumulating stocks of scarce commodities) than to go in for the manufacturing industry, it is mainly due to the fact that both political as well as economic conditions in these economies are not suitable for taking long term decisions. Besides, because of the low purchasing capacity of the people, the size of the domestic market⁴ is extremely small and this is a major hindrance in the introduction of modern techniques of mass scale production.

This therefore restricts severely the choice in the manufacturing industry for the local entrepreneurs, they would either manufacture luxury goods which are in demand by the local elite, or produce goods for the export sector. Generally the second alternative is more popular for the simple reason that with a limited domestic market even for luxury goods, it is more profitable to import these goods from other countries than to manufacture these locally. But even the second alternative has its limitation for it is a tough job to sell industrial products in the highly competitive world market. Consequently, it is the export of primary—mainly agricultural and plantation—products, which is of main attraction to the local entrepreneurs.

1. Monopoly Control Over Trade: No wonder that with this type of economic environment, which is not conducive for a healthy operation of the market forces, the emphasis in developing economies should have been on trade, and even here on a monopoly control by a handful of firms, mainly foreign.

But at the same time such a monopoly control over trade (at least till recently) by foreigners should not be construed to be the only factor responsible for the backwardness of these economies.⁵ Arguing in this way would

4. Incidentally the size of the country and the size of economic market are two quite different things. A country might have a large size in terms of geographical area and population, but from that it does not follow that it also has a viable market.

5. This has been the usual charge levied by a large body of development economists (principally Gunnar Myrdal, Hla Myint, Raul Prebisch, Hans Singer, Bagnar Nurkse). We also had the occasion to talk on this subject in the first Chapter, though in a different context.

amount to admitting that these economies already had the requisite development potential as well as a large consumer market but because of the behaviour of the foreign monopoly interests it was not possible to achieve the goals of industrial growth.

We would argue out slightly differently. We would say that domestic backwardness, perpetuated because of the existence of various market imperfections, could not but have encouraged a large scale monopoly control over foreign trade in primary products, which were having a thriving international demand. In other words, such monopolisation was the natural consequence of the prevailing economic environment in these economies. This sums up to saying that for domestic backwardness in these economies, the foreign Administrators were far more to be blamed than foreign firms.

2. **Rational Behaviour by Locals :** When foreign firms found it difficult to develop the local economy, within the existing economic and financial framework, then one can well imagine how very difficult it would have been for the local entrepreneurs to undertake this responsibility. Naturally the latter found it far more profitable to assemble local raw materials for foreign firms, on agency terms, than start some manufacturing industry.

True, in due course, some of these agents got into manufacturing activity. But this they did only after they had enough financial backing as well as access to technical expertise. However, for a long number of years they confined themselves mainly—rather exclusively—to the production of simple consumer goods, the demand for which was already known from the import statistics.⁶

6. In other words, imports from foreign countries provided a good guideline for the starting of local manufacturing activity. Since initially imports were mainly confined to consumer goods, we find that local industrialisation also followed this pattern of production. However, the induced effect of imports did not go a long way to encourage the growth of domestic manufacturing industry. This was mainly because of the unsatisfactory domestic conditions.

Thus while they readily accepted the production of consumer goods, they kept away from the basic and capital goods industries. This was for obvious reasons. First of all, the demand for the products of these industries was extremely limited and it was therefore not worth while to create capacity which could not have been utilised. Further, these industries demanded a liberal access to long term finance which was not possible to have in these economies. Thirdly, there were formidable technical and managerial constraints.

3. Foreigners in Local Industrialisation: It might be asked, if local traders could shift over to the manufacturing activity—though in a very limited way—in due course, then what had prevented the foreign trade interests in getting into the same? And further, how are we to reconcile such an attitude on their part with our early statement, that for the slow development in colonies foreign Administration was to be blamed and not foreign firms?

First of all, it is not entirely true to say that foreign firms did not participate in local industrialisation. In fact, much of the initial manufacturing activity owed to the initiative of foreign traders. This can be very well illustrated from India's past development. Here practically all consumer industries have been started by the foreigners.

Summary

To sum up, it is apparent from the above that the local climate in developing economies was not such as to encourage a rapid expansion of the manufacturing industry in general and heavy and basic industry in particular. Because of technological dualism the development of the agricultural sector was mainly confined to the periphery—specialisation in a few industrial crops. The vast majority of the farmers however continued to remain in a state of backwardness, and hardly had incentive to shift from the subsistence to the monetised sector. As a consequence of the separation of the rural sector from the mainstream of the urban sector it was not possible to create a countrywide

consumer market. Thus the production of manufactured goods had to be on a limited scale and this too was mainly confined to the selected items.

Planning and Price Mechanism

As has been suggested earlier, the backwardness of poor economies was not so much due to the operation of entrepreneurs as it was due to the conditions under which they had to operate. The nature of production was strictly governed by the domestic environment.

Notwithstanding this, these entrepreneurs are usually charged with adopting an unpatriotic attitude towards local development and are mainly held responsible for the backwardness in these economies. It is therefore fashionable to conclude that unless these entrepreneurs are eliminated and substituted by the public sector industries things would not improve. This is another way of stating that the price mechanism, operating under the laissez faire conditions, has done grave harm to the development of these economies and therefore there is a strong case for the State to interfere with it.

This argument is the natural outcome of the thesis that both foreign as well as local entrepreneurs (the latter were thought to be the henchmen of foreign firms) had done more harm than good to the local economy through a systematic exploitation of resources. However, one fails to understand the logic behind this argument. Surely such exploitation of resources was not done with a view to make the economies perpetually backward so that foreign as well as local entrepreneurs could thrive.

Wholesale Elimination of Free Market

Let us next examine the consequence of a wholesale elimination of the free market mechanism and its replacement by planned mechanism operated by the State. Will this be a significant improvement, over the free market mechanism? It would not be and here we agree, though

partially, with Harry Johnson⁷ that if the private sector was inefficient and not capable of operating manufacturing industry at an efficient level, then surely the State could not have done the job better either. After all the State merely reflects the general mood of the society.

We said we agree partially with Johnson. We think he is slightly unfair to the State. In view of its extended access to resources in the community, it is in a more comfortable position than the private sector in taking an overall view of the development of the economy. But then this is quite different from pinning all hopes on the State and thinking that it would have an all around better performance than the private sector. When we put emphasis on **all around**, then we would surely be committing a blunder.

The State could not show an all around better performance and neither it would be fair for it to dispense completely with the conventional market mechanism, for one could hardly think of a better allocator of resources than this mechanism.

State a Poor Allocator of Resources

When decision making is centralised in the State, it would be extremely difficult for it to take a large number of decisions almost simultaneously. And, without such decision making power, it is not possible to make an optimal allocation of resources. On the other hand, in a free market economy such decisions are automatically arrived at by the planning done at individual producer level, who—as it has been seen earlier—would be extremely careful in deciding what items to manufacture and in what quantity (that is, how much of the productive capacity should be created) and thereby renders an extremely useful service to the society.

The State could certainly not descend to the level of the individual decision maker—its decisions would be at the

7. See *Leading Issues in Development Economics*, Ed. G. M. Meir. First Edition, pp. 425-431.

macro level and the chances of such decisions turning out wrong are far more than decisions arrived at through the free market mechanism which has a built-in system of rational decision making.⁸

Though lacking in the optimal decision making power, the State could nonetheless exert its influence over the improvement of the local economic environment and thereby encourage entrepreneurs to step up the pace of industrialisation. For instance, one of the major hindrances for an optimal growth of the private sector is the lack of appropriate overhead facilities in the economy which deny access to a wider consumer market.

The Government should therefore concentrate its energies in strengthening the foundations of the economy, through the creation of adequate social and economic overhead capital. Only then can a strong industrial superstructure be built up which would impart lasting strength to the future development of the economy.

Harry Johnson Reconsidered

We again agree with the suggestion put forward by Harry Johnson that instead of destroying the market mechanism itself the State should create conditions which would help the functioning of the free market apparatus in an efficient manner.⁹ One would perhaps differ with him when it is impliedly suggested that free market is near costless while the system operated by the State is quite expensive.

8. This, of course, does not mean that the State, is an irrational decision maker. All it implies is that the State being a monolithic institution there are greater chances of its decisions not conforming to the realities of the economy. The private sector, on the other hand, being non-monolithic body and very much interested in profit maximisation would take decisions which are in conformity with the economic realities.

9. "...Properly functioning market system would tend to stimulate both economic efficiency and economic growth. And it is important to note that the market does this automatically, when it requires no big administrative apparatus, no central decision-making and very little policy other than the provision of a legal system for the enforcement of contracts." *Leading issues, Loc. cit.*, p. 427.

Surely free market is not as costless as Johnson thinks for behind the decision making by thousands of individuals there is the heavy cost incurred by them in planning production at individual level and this is reflected in their profit expectations.

Further, the contention made by Harry Johnson that the public sector is likely to commit far more serious as well as costly mistakes than the private sector is not wholly true. The private sector, which is the aggregation of activities of a very large number of entrepreneurs, cannot be immune from committing serious mistakes at times. When thousands of individuals are planning to create capacity in a particular line of production it might be that this has resulted in excess capacity. In such cases, there would be a wasteful use of resources, which would lead to unemployment as well as decline in income.¹⁰

Use of Appropriate Incentives and Disincentives

Supposing that, in spite of the best efforts of the Government to link the economy with modern facilities, the production in the private sector continues to be confined to goods largely catering to the needs of the few rich (which would rather be an exception). Here the State, instead of taking over these industries, should induce socially desirable output through the use of appropriate policy instruments. For instance, fiscal and monetary incentives could be used to encourage the production of social goods and positive disincentives (like heavy taxation and other penalties) could be used to discourage the production of luxury goods.¹¹

10. This again would be an exception rather than the rule. However, this does confirm the dynamic role that State plays in encouraging appropriate decision making in the private sector especially when this sector is surrounded by all sorts of imperfections.

11. In an economy just trying to develop one can easily anticipate lapses on the part of the private sector. This would need encouragement and guidance from the State. Consequently, a frequent use of the various policy instruments by the State should not be taken as a sign of the failure of the private sector. These would rather be necessary to get over the teething troubles.

While it is easier for the Government to take over the manufacturing industry, it is extremely difficult for it to take over the retail trade and agriculture. Unfortunately these are the sectors (especially agriculture) which need careful attention from the Government but are generally neglected.¹²

It is not suggested here that the Government should take over retail trade as well as the agricultural sector—even the hard core Socialists have found it extremely difficult to tackle these sectors. What is being suggested, and also what follows from the above discussion, is, that, instead of frittering away its energies on nationalised industries, the State should devote itself to reforming the retail trade as well as the agricultural sector. An appropriate approach to infrastructure itself as well as improving the information service would considerably help to solve the problems of these sectors.

Not a Hoary Cry

How does the above analysis fit into the argument raised, in the beginning of this Chapter, that planning should start formulating an optimal employment goal and work out targets of production accordingly? Will this approach be in conformity with the type of market mechanism that we have advocated above? Putting it slightly differently, with our ultimate goal of not-full-but optimal employment, could we leave its fulfilment to the private sector knowing fully well that the latter has failed so far to achieve this objective?

As we have consistently pointed out earlier, too much should not be made of the failure of the private sector. Such failure is not due to the fact that the private sector is not keen to make an optimal use of the resources in the

12. This might sound harsh but is a fact. While a lot of enthusiasm is displayed in the planning model to develop the manufacturing industry and also the scarce resources of the nation are geared to this end, agriculture and trade are thought to be of secondary importance.

community (including manpower) but is principally due to the fact that suitable environments for making an optimal use of these do not exist. Our conclusion therefore is that once new environments are created these would have their induced effect on the operation of the private sector. That is, the latter would be encouraged to create industrial capacity for optimising the employment of resources.

Of course, in the real world things would not be so simple. At times there would certainly arise the need for interference by the State in the operation of the private sector. This interference would ensure that it does not deviate from the optimal growth and employment path.

At the cost of repetition it may be added that while the State does not interfere excessively in the operation of the free market mechanism, it nonetheless plays an active role in it in the shape of providing basic guidelines for the achievements of the targeted goals of output and employment. Thus it must see that not only the capacity created in different sectors of the economy conforms to these targets, but also that an optimal use is made of this capacity.

Summing Up

While State (or development) planning is of recent origin, planning itself is an old concept—as old as economic history. Behind the market facade lies the careful planning done by a multitude of entrepreneurs who, on the basis of past performance of their businesses as well as of future market expectations, build up capacity which broadly conforms to capacity built under planned development by the State.

As between hundred per cent Socialism and partial Socialism, the latter is to be preferred for it is more flexible and there are fewer chances of the State committing serious technological and resource allocation errors, which could be heavily expensive for the community.

But simultaneously a question arises, how much should

this partial Socialism be? There can be no straight answer to this. Much would depend upon the conditions obtained in an individual economy. But one thing is certain, that is a healthy operation of such an economy is conditioned by the State of its market mechanism. A free market mechanism, operating under optimal social norms, would be the best allocator of resources to different economic activities. If, on the other hand, there have been serious misallocations of resources in developing economies the fault is not so much of the price mechanism, which is generally thought to be the principal villain in such allocation, as of the conditions under which such a mechanism has to operate.

The State would therefore do well to keep itself away from the manufacturing industry as far as possible and instead concentrate its energies in improving the existing market structure. Hence the role played by the infrastructure facilities is supreme. The role of the State, however, does not end here. It as well has to use its fiscal, monetary and commercial policies in such a way that the private sector does not deviate from the path of optimal resource allocation and of employment.

VIII

Summary, Additional Remarks and Final Word

Why Economic Development ?

A question was posed at the start, why interest in economic development? We observed that it was the outcome of certain recent developments, occurring at international as well as national level.

Nationalism

Foremost has been the growth of nationalism in poor economies, especially in the erstwhile colonies. Such nationalism itself has been the result of the imposition of a dualistic pattern of development in these areas by the foreigners. Under this, a highly developed business sector mainly controlled by foreign interests co-existed with a traditional sector sunk in appalling poverty and practising outmoded techniques of production.

The terrible gap in technology and organisation that existed in the two sectors had attracted the attention of the local intelligentsia, which hailed from the well-to-do families. Well educated, informed and widely travelled, these members were politically alert as well as explosive. They constantly agitated against the harmful consequences of the demina-

tion by foreign interests over their economies and thereby kept the foreigners on their toes. The latter had, in due course of time, realised that they could not keep the nationals in colonies or elsewhere in watertight compartments and must give them their due.

Other Factors

Simultaneously other factors like the two major world conflicts, the creation of the International Labour Organisation as well as the October, 1917 Russian Revolution, had also played a significant part in the relaxation of foreign hold over these areas, as well as arousing interest in their economic development. The Russian Revolution in particular, was a precursor to state planning, which came to be regarded as the most potent instrument for eradicating poverty in the poor countries. This, therefore, had dealt a heavy blow to *laissez faire*, a policy which had been actively practised by the Western nations for over a long period.

These factors had therefore joined hands in first stimulating interest in economic development and later on giving it a practical shape, the best example of the latter is the establishment of the United Nations, which has been the major instrument in promoting economic co-operation at international level.

Economic Development—Problems of Definition and Measurement

In the following Chapter we had addressed ourselves to a few preliminary issues like, what is economic development? Is it different from economic growth? Further, was it measurable?

Economic Growth and Development

Talking of economic growth and economic development, it was observed that the two referred to totally different situations. The former referred to the maintenance of

a particular growth rate in income which conformed to full employment level. This, of course, was not the subject of interest for developing economies. Here the maintenance of growth rate would only mean perpetuating poverty. Their major interest was therefore how to accelerate the growth rate.

The latter called for the introduction of structural changes in the existing techniques of production, in the occupational pattern of the labour force (that is, shifting them from traditional to new industries), and also in the outlook and the behavioral pattern of the local population. All this was more related to development economics than to growth economics and hence there was need for highlighting the role of development economics in so far as developing economies were concerned.

Development Measurable

Further on we saw that as our main concern was with the rate of growth in the level of development, it impliedly followed that the concept of development was measurable. We had laid especial emphasis on the growth of aggregate income than on per capita income. The latter was found to be a superfluous index for measuring the rate of change in economic development. This was because development being a long term process,¹ any emphasis on per capita income was superfluous, for, over time, there could not have occurred a sustained growth in aggregate income if per capita income were not rising simultaneously.

Welfare Considerations

To suggest that development should have a built-in welfare norm was to expect too much from it. In fact, de-

1. No one could, of course, say for how long this process would continue. We feel that, in spite of advances in science and technology, the take off phase would at least occupy a minimum of two decades. The process of assimilating and adapting foreign techniques is itself going to be a time consuming process and more so when technology is undergoing a rapid change.

velopment itself—and rapid development in particular—would demand some sacrifice from the people and thereby impose certain hardships on them. Of course, such hardships—it was suggested—would only be for a limited period. Otherwise the very purpose of economic development itself would be defeated.

Emphasising 'limited period', it was further observed, that our interest was primarily in undergoing those sacrifices which were undertaken so that everybody was better off after sometime but not after too long.

Associating economic development with welfare has led some economists to attach larger weight to per capita income than aggregate income, for, they argue out, if per capita income were rising only then the welfare norm of the society would also be rising. This might or might not happen. That is, there is no prior relationship between the two. However, if aggregate income were rising over time, then, not only per capita income would also be rising, equally the welfare of the community would as well as be rising. Welfare was, therefore, the function of the rising aggregate income and such a rise could not be maintained over time unless welfare of the community as a whole were not rising.

National Income the Most Suitable Measuring Stick

National income accounts were found to provide the best possible device for measuring economic development. The alternative measures like longevity, the level of education, the level of culture and the like were found to be less satisfactory indices for measuring development. Further, if national accounts were properly constructed, these would also help in making valid international comparisons in the levels of living and thus help in the formulation of appropriate policy goals for trade and economic development.

Further, emphasis should be on income at current prices and not at constant prices. This was because a steadily rising income path could be built with the aid of con-

stant prices. Rather a continuous, though slow, rise in prices would have an encouraging effect on the growth rate. This would also help the State in raising larger revenue (through appropriate fiscal policy), and thereby facilitate financing development projects. Equally, as entrepreneurs would be enabled to maximise return on their investments, the business activity would be at its new high. The society would, as well, benefit, for a steady rise in prices would open up new avenues of employment.

Surpluses and Economic Development

In the next Chapter we had examined the role played by farm surpluses in economic development. It was observed that it was the availability of wage goods, mainly food-grains, which determined the speed of economic development. If stocks were in abundance, economic development would also follow a smooth path. Otherwise it would run into difficulty.²

Later on, a discussion was introduced on the basic issues involved in the creation as well as in the mopping up of food surpluses. The current discussion on the problem was found to exaggerate needlessly the difficulties faced in feeding people withdrawn from the farm sector and employed for capital creation. It was argued that, after these labourers were withdrawn, there would occur a rapid decline in food production.

This was found illogical. If this were to happen then there was no sense in withdrawing these people. In fact, the whole purpose of withdrawing them was to reduce their pressure on farms for their presence was a hindrance to further growth in output. Their withdrawal from agriculture would therefore provide an opportunity to those who were left behind to reallocate resources and workload so as to obtain an optimal output from the land.

2. For instance, under such a situation inflation would be the obvious consequence. The speed at which it would develop would be directly proportional to speed at which development takes place, thereby nullifying the entire impact of development itself.

Objections Examined

However, this line of approach was objected to by certain people. First of all, they argue that those, left behind, after the withdrawal of certain members, would mostly be elderly persons who would have a lower work efficiency. But this was questioned. Rather one should have thought that the work efficiency of the elder members would be higher than younger ones because of their experience.

Further, it is suggested that those who are left behind would hike up their consumption at the first available opportunity. However, one fails to understand why should this happen. To assume that older members have consumption propensity equivalent to younger ones would itself be not correct.

It is nonetheless added by the exponents of underconsumption theory that members left behind are victims of under-consumption and therefore transference of younger members would provide them with an opportunity to make good the gap in consumption. This sort of argument does not tick up with the theory of under-employment, which makes one strong and valid assumption that the total food cooked in the family kitchen would be enough to meet the normal consumption needs of all members.

Even if the consumption propensity of those who were left behind were to increase—for instance, through frequent indulgence in community feasts and ceremonies, from it, it did not follow automatically that excess consumption would continue for an indefinite period. Rather, it was likely that such indulgence, if any, would peter out after it had got to its saturation point.

Surpluses and Terms of Trade

The role of surpluses was also discussed from the point of view of terms of trade between the agricultural and industrial sectors. Even if the terms worsened—that is, these favoured the industrial sector (which would rather be a remote possibility)—our conclusion was that these would not adver-

sely effect the output in the agricultural sector. One of the major factors behind this was that once the farmers had got used to a new standard of living, they would not like to give it up merely because the trading terms had got worse. It might even happen that such unfavourable terms provide positive incentive to farmers (of course, within limits) to increase output.

Further on a problem was posed, was there any possibility of foodgrains to be produced in excess of domestic requirements? This appeared to be a possible situation in economies, where the income elasticity of demand for foodgrains, was very low, and not in developing economies, for here the demand elasticity was rather very high.

1. Foodgrains to Occupy Priority No. 1 in Agriculture: However, a rising income level over time, would bring about diversification in the consumption pattern of the people. Such diversification would also be reflected in the cropping pattern of the farmers, who would now be engaging themselves more frequently in industrial crops. This would surely affect foodgrains production. However, as this situation needed to be avoided in the interest of long term development, it was suggested that appropriate incentives should be provided to the farmers to increase foodgrains output and avoid excessive diversion of land to alternative crops.

In fact, it was even suggested that developing economies would be no worse off if they were to have over-production in foodgrains; but perhaps they would be worse off if they were to face over-production in alternative crops. This was based upon the fact that while synthetic goods were active in replacing industrial farm products, this was not so in the case of foodgrains (still synthetic food is a remote possibility).

2. Minerals Preferred to Industrial Crops: It was further observed that as between agricultural raw material and minerals, the latter enjoyed a higher growth inducing

advantage. This of course was based on the assumption that the country was endowed with appropriate minerals.

Industrialisation and Balanced Growth

Notwithstanding the important role food surpluses and minerals played in economic development, it was at the same time felt that the growth drama would be incomplete without the industrial sector. The latter, in fact, made a heavy demand on the inputs produced by the other two sectors.³ Thus there was a strong case for balanced development between agriculture and industry. This, however, could only be promoted through a vigorous interference by the Government, and therefore could not be left at the mercy of the market forces.

We also tried to spell out the various concepts pertaining to balanced and unbalanced growth. In most of these, it was observed, a larger emphasis was laid on industrialisation which was thought to be the only prescription for promoting rapid development. Some of the growth economists had even adopted a negative attitude towards agriculture and thought that the root cause of backwardness in these economies was their agriculture. Thus energies devoted to rehabilitate agriculture would merely give rise to a wasteful use of resources. The latter could be, so continues the argument of these economists, more effectively devoted in creating a package programme of industry and infrastructure facilities.

On the contrary the sympathisers of unbalanced growth consider economic development to be exclusively the function of setting up of key industries. The latter should, consequently, receive a very high priority in the strategy of economic development. They are further convinced that

3. This, of course, does not mean that the manufacturing sector is not an important consumer of agricultural raw materials. All it means is that in the determination of priorities the first place would have to be accorded to foodgrains, then to minerals and last to agricultural raw materials. However, if the economy is not endowed with appropriate minerals, then, of course, agricultural raw materials would have priority next to foodgrains.

once the leading industries got cracking other sectors of the economy would follow up automatically, as if these were only waiting for the emergence of leading industries. This was found to be unconvincing.

It was concluded that both balanced and unbalanced growth theories, which generally relegated agriculture into background, failed to offer any concrete solution to the problem of development. It was, therefore, necessary to develop an alternative theory of **balanced development** which accorded an appropriate place to agriculture.

Balanced Development

In this Chapter we had shifted from balanced growth to balanced development. Our focus being on development and not on growth, thus it was necessary that a theory of balanced development was evolved which could be found useful for the growing economies. In this theory emphasis was laid on 'systematic intersectoral development'. But such intersectoral development did not at the same time imply that all sectors should be growing at a uniform rate. Here the sectors had to grow at a unique rate depending on the weight that they were able to exert on the overall rate of development. Thus differential sectoral rates of development and even differential intersectoral rates of development were perfectly justified in the theory of 'systematic sectoral development'.

Planning and Optimal Resource Allocation

As to what should be the rate of such 'systematic intersectoral development', it was suggested that much would depend upon the unique development potential of individual economy. It was here that economic planning assumed a significant role. The planning process should not be so much concerned with the building up of huge public sector projects but should try to use those policy instruments which would encourage an optimal resource allocation in the economy. Thus; instead of getting entangled in a myriad of

industrial and trading activities, which could safely be left to the care of the private sector, the State should try to concentrate its energies on those activities (especially infrastructural facilities) which would have a large growth inducing effect in the economy.

A New Look at Investment Criteria and Alternative Techniques of Production

We had subsequently moved on to the specific problem of investment (investment criteria) and alternative choice in techniques. A large part of the current discussion, on both these problems, was found to be highly controversial and abstract—having little practical utility. It was, therefore, felt that economic development could not be had through concentrating exclusively either on the maximisation of the growth rate or on the maximisation of employment. It was, on the other hand, a complex process which called for a careful prospecting of an appropriate technique mix by the Planning Commission.

In this context it was suggested that the alternative approach of productive capacity would provide an appropriate solution to the problem. When the goal of economic development was to have a full utilisation of the rated capacity, it followed from it that capacities in different sectors of the economy would be so created as to assure their full exploitation. And, when this approach was adopted, the problem of technological choice was easy to handle. Rather, it was neatly subsumed in the rated capacity.

Problems of Capital

The theory of optimal capacity, as developed in the previous Chapter, would also have an important bearing on the determination of the total requirements of resources of the economy, as well as the sources from which these were to be tapped. Taking up the specific instance of foreign capital, needed for accelerating the pace of economic development, the concept of capacity output was found

to provide a reasonably reliable index for evaluating the requirement of such capital. In fact, when attention was focussed on such a norm, there would automatically be a careful budgeting of capital.

It was further observed that the developing economies generally suffered from foreign capital illusion. That is, they thought that such capital could be borrowed in any amount and also that since it bore a nominal rate of interest it was almost costless. However, our conclusion was that it was neither available in any amount, nor it was costless. Rather it was excessively expensive and imposed a heavy burden on the borrowing countries.

Consequently, if larger attention were devoted to the creation of optimal capacity, warranted by the optimal growth of output, then a larger attention would also be given to the mobilisation of domestic resources thereby reducing dependence on foreign capital to the minimum possible level.

Population and Economic Development

In the next Chapter we had moved on to the role of population (or labour force) in economic development. It was stated that the growth of population could not be treated as an independent variable (that is, independent of economic development). For example, there was a general belief that this was exclusively the outcome of the expansion of health facilities. We did not find much substance in this statement. Rather it was concluded that with economic development better health facilities would as well emerge and these in turn would promote further economic development. Thus all three variables—economic development, health facilities and population growth—were interdependent and not independent of each other.

Then we had examined the ambiguity suggestive in the argument, so often put forward by the demographers, that there was a maximum population growth phase in the population path beyond which it would not go. Rather, it was

emphasised that with appropriate time lags, it would start receding from the maximum growth point and ultimately stabilise itself at a growth level which corresponded to the desirable standard of living.

It was, however, found to be not a happy observation and was open to criticism. First of all, should the maximum population, that a particular economy could reach, be that which could be reversed? It might be that such a maximum population was the one which conformed to optimal population so that there was no case for its reversal. Further, the optimal population point was not the one which was determined but once. It was invariably a shifting point following the path of the standard of living.

Our suggestion, therefore, was that among the alternative population paths optimum population had a greater operational significance for developing economies. Thus an appropriate understanding of this concept would help in the building up of an optimal strategy for economic development, which would as well conform to the optimal rate of development.

It was also suggested that appropriate weight should be given to population in the development models which generally gave a larger weight to capital than to population. It was because of such wrong priority determination that it was not unusual to find that most of these models came to grief.

Planning and Price Mechanism

In this Chapter it was suggested that, while for speeding up economic development, planning was essential, the latter should, however, be confined only to those fields which failed to attract investment from the private sector and which were also of the nature that without these it was not possible to attract a large scale private investment. For instance, it was only after the basic facilities as well as inputs were available that there would occur a rapid growth of the private sector itself.

We also had the opportunity to examine the factors behind seemingly old behaviour of the private sector in developing economies, where, it generally preferred to invest either for accumulating stocks of scarce products or for manufacturing those goods which had a selective market confined to the richer members. However, it was found that there was nothing odd about their behaviour. It was in full conformity with the existing environment in poor countries which did not encourage long term investment. However, the moment appropriate changes were made in this environment, there would also occur contra changes in the outlook and behavioral pattern of entrepreneurs in developing economies. In other words, they would now be motivated to manufacture goods which cater to the requirements of the mass domestic market.

It was, therefore, suggested that the free market mechanism has still an important role to play in developing economies. Its substitution by a comprehensive State control over production and distribution was neither desirable nor feasible. It was not desirable for when the private sector could do the same job as efficiently as done by the State (perhaps even more efficiently), then there was no point in duplicating efforts. It was not feasible because technical and financial resources being extremely scarce it was essential that these were employed productively. Putting it slightly differently, the capacity created in the different sectors of the economy should conform to its overall development requirements.

Thus the job of planners, it was concluded, was that of determining appropriate capacities to be created in different sectors of the economy which should conform to the optimal resource utilisation; but they should leave the fulfilment of various production targets to the private sector. How far these targets are achieved would very much depend upon the fact as to how far the planners have succeeded in creating an appropriate climate for the healthy functioning of the private sector.

Final Word (?)

There is no final word in the theory of economic development. As this is a continuing and growing process, new ideas and new techniques would continue to emerge. However, our discussion has tried to suggest that there is need for some rethinking on the current approaches, (a) to the problem of utilisation of farm surpluses for economic development, (b) to the theory of balanced growth, (c) to the accumulation of capital and (d) to the population and planning problems.

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